

School of Theology at Claremont



1001 1323948



The Library
SCHOOL OF THEOLOGY
AT CLAREMONT

WEST FOOTHILL AT COLLEGE AVENUE
CLAREMONT, CALIFORNIA

B2
200
H3
1894

THE
PHILOSOPHICAL BASIS
OF
THEISM

AN EXAMINATION OF THE PERSONALITY OF MAN TO ASCERTAIN HIS CAPACITY TO
KNOW AND SERVE GOD, AND THE VALIDITY OF THE PRINCIPLES
UNDERLYING THE DEFENCE OF THEISM

BY
SAMUEL HARRIS, D.D., LL.D.

PROFESSOR OF SYSTEMATIC THEOLOGY IN THE THEOLOGICAL DEPARTMENT OF YALE COLLEGE

REVISED EDITION

NEW YORK
CHARLES SCRIBNER'S SONS

1894

COPYRIGHT BY
CHARLES SCRIBNER'S SONS.
1883.

School of Religion

TO
The Students
WHO IN SUCCESSIVE CLASSES HAVE BEEN
UNDER MY INSTRUCTION
IN PHILOSOPHY AND THEOLOGY IN BOWDOIN COLLEGE
AND IN
BANGOR AND YALE THEOLOGICAL SCHOOLS
THIS BOOK IS
RESPECTFULLY DEDICATED.

A11331

School of Theology
at Claremont

PREFACE.

When I began to give instruction in systematic theology, the discussions in the class-room were continually forcing us back to preliminary philosophical questions, pertaining to the reality, processes and limits of human knowledge, and to the constitution of man as a personal being. I thus found it would facilitate our work to treat these questions together in a course of preliminary lectures on the Philosophical Basis of Theism. Students in successive classes have found these lectures and discussions helpful both in their studies of Apologetics, Theodicy and the Philosophy of Religion and in the clear and intelligent apprehension of the Christian truth and life. Many of them, from year to year, have assured me that they had been greatly helped by them and have expressed their earnest desire for their publication. From these annual lectures and discussions this volume has grown up. I publish it, partly because, with the volume before us as a text book to refer to, I shall have more time for examining with my classes the subjects which belong more distinctively to systematic theology; and also with the hope that discussions, which have already been helpful to many young men, may be of service to others who are striving to solve the great theological and religious problems of our times.

Yale Divinity School, June 23, 1883.

CONTENTS.

CHAPTER I.

INTRODUCTORY.

- § 1. DESIGN OF THE BOOK. 1
- § 2. NEED OF IT.—I. The question being, does a personal God exist, we must first ascertain what personality is.—II. The ultimate question with the atheist pertains to the reality of knowledge. Atheism denies that man can know God. Atheism rests its denial on false theories of knowledge. Every atheistic theory of knowledge involves agnosticism. The real question with the atheist.—III. False positions of Christian theologians.—IV. Results to be attained. 3-9

CHAPTER II.

KNOWLEDGE AND AGNOSTICISM.

- § 3. WHAT KNOWLEDGE IS.—Implies subject, object and knowledge. Is always the intellectual equivalent of reality. Is a primitive act, incapable of definition. Known in the act of knowing. 10
- § 4. AGNOSTICISM.—Partial agnosticism involves complete. 10-11
- § 5. REALITY OF KNOWLEDGE.—I. A primitive datum of consciousness. 1. Man's knowledge of himself and his environment. Objection that this is not a demonstration answered. 2. Knowledge of first principles. 3. Knowledge of God. 4. The Ego, the World, and God. 5. In what sense from experience.—II. Agnosticism not tenable. Denies the trustworthiness of human intelligence. Contradicts universal consciousness. Not defensible by argument. Is self-contradictory—Hegel's maxim. Continuous equipoise of thought impossible.—III. Any theory of knowledge involving agnosticism is false. 11-20
- § 6. KNOWLEDGE AND FALLIBILITY.—Objection stated.—I. Answer that it involves agnosticism.—II. Assumes as fact what is contrary to universal experience.—III. The rational ground for persistent belief.—IV. A nucleus of knowledge within a zone of probability.—V. A great mass of knowledge persists. Changes in the progress of physical science. Changes in the progress of philosophy. Changes in the progress of religious belief. 20-26

- § 7. CRITERIA OF PRIMITIVE KNOWLEDGE.—I. Self-evidence.—II. Impossibility of thinking the contrary. Applicable both to Rational and Presentative Intuition. Primitive belief not the result of mental impotence. The unthinkable distinguished from the inconceivable. Objection that God is unknowable because inconceivable.—III. Persistence.—IV. Consistency with all knowledge. Use in science and all reflective thought. Applied to test primitive knowledge. 26-31
- § 8. KNOWING, FEELING AND WILLING.—I. Are distinct, not separate.—II. True philosophy must recognize the distinctness and the inseparableness. 1. Present tendency to overlook the inseparableness. Exemplified in Theology. 2. Errors from overlooking their distinctness. In what sense feeling is said to be a kind of knowing. Feeling and willing not ultimate criteria.—III. In what sense feeling and willing test and verify knowledge. 1. In rebutting Spencerian agnosticism. 2. In implying objective reality. 3. In finding scope for realizing the highest ends. 4. The action of the individual and of mankind tests what is true.—IV. Errors of skepticism and materialism from overlooking the relations of knowing, feeling and willing. 1. Final causes. 2. Wrong conception of love of truth. 3. Right moral character favorable to the investigation of truth. 4. Explains the fact that knowledge is advanced by the growth or development of the man. 31-43

CHAPTER III.

THE ACTS AND PROCESSES OF KNOWING.

- § 9. CLASSIFICATION.—Intellect, Sensibility and Will. Intuition, Representation, Reflection.—I. Faculties.—II. The Mind active in knowing.—III. Element of intelligence contributed by the mind.—IV. How acts of knowledge are distinguished. 44-45
- § 10. INTUITION OR PRIMITIVE KNOWLEDGE.—I. Definition.—II. Presentative Intuition and Rational. 1. Presentative intuition defined. Includes sense-perception and self-consciousness. 2. Rational Intuition defined. 3. Intuition is primitive knowledge. 4. Intuition the common name of both.—III. The mind considered as capable of Rational intuition is the Reason. 45-47
- § 11. REPRESENTATIVE KNOWLEDGE.—Definition: representation and memory. Self-evident knowledge in memory. Relation to other knowledge. Theories of Huxley and Mill. Physiological Explanation. 47-48
- § 12. KNOWLEDGE BY REFLECTION OR THOUGHT.—I. Definition. 1. Pre-requisite that the object and regulative principles be given. 2. Presented indeterminate. Not minima visibilia. Nebulous matter of intuition. 3. Apprehension, Differentiation, Integration.—II. These three the processes of all human thinking.—III. Thought merely discovers.—IV. Subsidiary objects of Thought. 48-54
- § 13. THOUGHT DISTINGUISHED BY ITS OBJECTS.—I. Abstract or Formal.—II. Concrete or realistic.—III. Creative or Imagination. 1. Fancy its lower form. 2. Its higher form, creates ideals. 3. Leads in every sphere of intellectual activity.—IV. Science advanced chiefly by concrete thought. 1. Formal thought inadequate because it stops in words.

2. Inadequate for synthetic processes and judgments. 3. The three axioms of formal logic insufficient. 4. Leibnitz' Sufficient Reason. Prof. Bowen's three principles. 5. Principles underlying concrete thought. 6. These last principles at the basis of all scientific thought. 7. All science empirical, philosophical and theological, advanced chiefly by concrete thought. 54-61

§ 14. INDUCTION AND THE NEWTONIAN METHOD.—I. Simple or Baconian Induction. 1. Extends knowledge beyond observation. 2. The principle on which it rests. Known by rational intuition. Indefinite statements of the principle. The uniformity of Nature defined. 3. Distinguished from erroneous conceptions of it. 4. This brings no discredit on Induction. 5. Induction and Hume's objection to miracles.—II. The hypothetical, or Newtonian Method. 1. Differs from induction in data, methods and results. 2. Illustrated from common life; the lost camel. 3. The hypothesis created by imagination. 4. Aided by previous knowledge, habits of observation, analogy. 5. Verification: two requisites; a third way sometimes. 6. The intuitive principle on which it rests. 7. Importance and general use of this method. 8. Now called induction; improperly so. 9. Neither method peculiar to physical science. 10. Anticipations. 61-72

§ 15. RELATION OF REFLECTIVE THOUGHT TO INTUITION.—I. Reflection gives no elemental material for thought. 1. True only when intuition includes presentative and rational. 2. True only of primitive or elemental realities.—II. Within these limits knowledge enlarged by thought.—III. Can discover the unknown only by the known.—IV. Reflective knowledge always preceded by spontaneous knowledge. 1. In what sense faith precedes knowledge. Not peculiarly applicable to religious knowledge. 2. No Faith-faculty as the distinctive organ of religious belief. 3. Various meanings of faith. 4. Belief of Testimony.—V. Reflection and experience become spontaneous in common sense. . . . 72-81

§ 16. RELATION OF REFLECTIVE THOUGHT TO UNIVERSAL REASON.—The universe is grounded in and the manifestation of Reason.—I. This the ultimate ground of knowledge by inference and by induction.—II. Only by this can thought solve its ultimate problem. 1. Thought culminates in finding the unity of the manifold. 2. Must be the unity of rational system. 3. Possible only in recognizing a personal God.—III. Primary motive of scientific investigation. Kant's three questions of philosophy. 81-85

§ 17. PROBABILITY.—I. Assent according to degree of evidence.—II. When the improbability is slight, it is unnoticed.—III. Assent on probable evidence a guide to conduct.—IV. No peculiar significance in application to religious belief. 85-87

CHAPTER IV.

WHAT IS KNOWN THROUGH PRESENTATIVE INTUITION.

§ 18. WHAT IS KNOWN THROUGH SENSE-PERCEPTION. 88-91

§ 19. WHAT IS KNOWN THROUGH SELF-CONSCIOUSNESS.—I. Object, subject and knowledge known simultaneously. Essential in every act of knowing. Object and subject are two realities known in one intellectual act.

- Implicit or virtual consciousness. Formulas expressing direct and inverse knowledge.—II. Knowledge of our own mental operations. Comte's objection. Answer.—III. The mind has knowledge of itself. 1. The error that the operations may be known, not the mind. 2. Error that we are more certain of the operations of the mind. 3. Error that mind is a series of states of consciousness. 4. Mind conscious of self only in its operations.—IV. Individuality and identity known in consciousness.—V. Rationality and Freedom known in consciousness. Attributes of Personality. Knowledge of personality positive not negative. Can know others as persons. Knowledge of self as person prerequisite to knowing God. 91-99
- § 20. KANT'S THING IN ITSELF.—Statement of his doctrine.—I. Phenomenalism his fundamental error.—II. Error of presenting noumenon and phenomenon in an antithesis and reciprocally exclusive. Origin of two incompatible types of thought.—III. Misinterprets and contradicts consciousness.—IV. Not a *noumenon* or necessary idea of reason. 1. Is an attempt to conceive of substance without properties. 2. The postulation contrary to reason. 3. Assumes creation in thought of an element not given in intuition.—V. Discredits Reason by making its ideas fictitious.—VI. Involves absurdity. No knowledge if a mind knowing. Knowledge of the unknowable the condition of knowing. Implies a faculty above reason to criticise it. The only way in which Reason can be discredited.—VII. Issues in agnosticism 99-109
- § 21. RELATIVITY OF KNOWLEDGE.—I. Objection stated. First form. Second form. Third form.—II. Answer to Third form. 1. Answered by §§ 18, 19, 20. 2. The statement of the objection implies knowledge of reality. 3. Involves absurdity. 4. Issues in agnosticism. . . . 109-113

CHAPTER V.

WHAT IS KNOWN THROUGH RATIONAL INTUITION.

- § 22. UNIVERSAL PRINCIPLES NOT PARTICULAR REALITIES. 114-115
- § 23. RISE AND DEVELOPMENT IN CONSCIOUSNESS.—I. Are constituent elements of reason.—II. Appear in consciousness on occasion in experience.—III. Regulate thought and action before they are recognized in thought.—IV. Not innate ideas. Dr. Büchner's mistake. . . . 115-117
- § 24. SIGNIFICANCE AS REGULATIVE.—I. Significant only as applied to beings. Distinguished from Mysticism.—II. Do not guarantee correctness of judgment. Objection that the ancients believed antipodes impossible. Objection by Helmholtz.—III. Determine the possible and the impossible. 1. What is possible to thought. 2. What is possible for will-power to effect. 3. What is possible in nature. 117-121
- § 25. VALIDITY OF RATIONAL INTUITIONS.—I. Sustain all the criteria of primitive knowledge.—II. Indispensable in Reasoning.—III. Verified in experience. In common sense. In physical science. Exemplified in Mathematics. Prof. Clifford's objection. This verification continually going on.—IV. Essential to interpret sense-perception.—V. Objection that not universally believed. 1. Unknown to infants and savages. 2.

Not necessarily believed by the cultivated; J. S. Mill's objection. Inane objections.—VI. Objection that they are self-contradictory; 1. Kant's Antinomies explained; Prof. Clifford's use of them. Hamilton's use of them. Mansel's use of them. 2. If the objector's assertion is true the objection is fatal; but it is the only objection. The objection itself appeals to the authority of reason. 3. The antinomies rightly understood are not contradictions but complementary truths; examples. 4. The true argument from the antinomies. Kant's explanation of it; and why inadequate. 5. H. Spencer's Antinomy and agnosticism. 6. Kant's admission as to his phenomenalism.—VII. Objection that rational intuitions arise from the experience of the individual by association of ideas. Statement of Mill. Statement of Diderot. 1. Individual experience inadequate to account for them. 2. If thus arising, they would be inveterate prejudices. 3. Falls into subjective idealism and agnosticism. 4. Has been found inadequate and is abandoned.—VIII. Objection that they are the result of the experience of the race in its evolution. 1. Admits they are now constitutional and *a priori* to the individual. 2. Admits they are valid and give real knowledge. 3. If so, their origin is of minor consequence. 4. Evolution does not account for them. 5. Objection that evolution reaches back of the primitive man. 6. Laws of thought not in continuous flux.—IX. Objection that rational intuitions are subjective and illusive. 1. Is a specific application of the theory of relativity of knowledge. 2. Incompatible with the theory of ancestral experience. 3. Without rational intuitions knowledge is disintegrated into subjective impressions. 4. Reason is everywhere and always the same.—X. The validity of rational intuitions involves the existence of supreme and absolute Reason. 1. Truth has no significance except as a mind is its subject. 2. These principles not peculiar to an individual. 3. They have reality only as truths of absolute Reason. 4. Reason in man the same as in God. 5. Christian Theism explains and confirms them by the truth that man is in the image of God. 6. Objection; this is anthropomorphism. 7. Objection; this involves Pantheism.—XI. The only reasonable explanation is that the intuitive principles are truths of Reason. Failure of the three empirical positions exhausts the resources of empiricism.—XII. Three conditions of the possibility of science.—XIII. Atheism rests on some theory involving agnosticism. . . . 121-151

CHAPTER VI.

THE ULTIMATE REALITIES OF HUMAN KNOWLEDGE.

- § 26. MEANING OF ULTIMATE REALITIES.—Categories: Aristotle's use of the word and Kant's 152
- § 27. MATTER AND FORM.—Plato's "Ideas."—Kant's error as to forms and categories. The true position. 152-153
- § 28. CLASSIFICATION.—The two classes and their subdivisions, and why. Aristotle's classification of categories. Knowledge begins as knowledge of particular beings; issues in knowledge of the Absolute Being. 153-154

CHAPTER VII.

ULTIMATE REALITIES PRIMARILY KNOWN IN PERCEPTIVE INTUITION; BEING AND ITS MODES OF EXISTENCE.

- § 29. BEING.—I. Known in perceptive intuition and cannot be defined otherwise.—II. Is a particular or determinate being.—III. In perceptive intuition known as existing in various modes; in rational intuition known by reason in its true significance and reality.—IV. Known in its whole reality as substance and quality. The Greek usage. Does everything flow? substance, persistence, existence. Not essential to being that it be eternal, self-existent, etc. Synthesis of being and phenomenon.—V. Being is fundamental; all other realities pertain to being. Aristotle's genera of Being. The concrete determinate Being is the unit of knowledge. 155-158
- § 30. MODES OF EXISTENCE.—I. Power. Power in motion; intellectual power; will-power. Quality. Substance and cause. Power hypostasized. James Mill's denial of power. Cause: agent, transitive, reactive, free. Object or recipient.—II. One and many. 1. Individuality and identity; origin of the ideas. Does not imply simplicity. In what sense indivisible. Belief in existence after death from belief of personal individuality and identity, not from shadows and dreams. 2. The individual and other beings. Knowledge of the outward object. Things and persons. 3. Number; origin of the idea.—III. Extension in space. Origin of the idea. Not a subjective form of sense but a form of things. The fourth dimension of space.—IV. Duration in time.—V. Quantity.—VI. Difference and relation. 158-167
- § 31. INFERENCES.—I. Knowledge ontological in its beginning. Critical point against agnosticism.—II. Knowledge begins as knowledge of personal beings and impersonal. Mansel's objection. Excludes materialism and idealism. Kant's phenomenalism. J. G. Fichte's attempt to avoid it by knowledge of self. Hegel's attempt to avoid it. His near approach to the true philosophy and his failure. These failures prove that knowledge must begin ontological if it ever becomes so.—III. Knowledge begins as knowledge of determinate being. 1. Excludes the error that being is primarily in the genus or the universal. 2. Being is not the one only substance of pantheism. 3. Finite persons and things are real beings.—IV. Being is not an attribute but the subject of attributes. Not the sum total of all attributes. Affirmation of being not the weakest of affirmations. Attributes common to all beings.—V. Determinateness of being is not limitation. *Omnis determinatio negatio est*. The fallacy of agnostics and pantheists in reasoning from this maxim. God determinate but not limited.—VI. Origin and necessity in perceptive intuition of the distinction of science into physical and metaphysical 167-179

CHAPTER VIII.

THE TRUE: THE FIRST ULTIMATE IDEA OF REASON.

- § 32. THE FIVE ULTIMATE IDEAS OF REASON.—Meaning. Noumena. The Five Realities of rational Intuition named and defined. Rational Intuition does not give knowledge of being, 180-182

- § 33. THE TRUE: THE FIRST NORM OR STANDARD OF REASON.—I. Definition.—II. Are principles of things as well as of thought. Are archetypal in Absolute Reason; Plato's Ideas. Rational beings know the supreme reason. 182-184

CHAPTER IX.

THE RIGHT, OR LAW: THE SECOND ULTIMATE REALITY OF REASON.

- § 34. GENERAL SIGNIFICANCE OF RIGHT OR LAW.—Definition of Law.—I. Law to intellectual and physical power. 1. Determine what it is possible for power to effect. Laws of thought. Laws of Physical Power. 2. Definition of Right. 3. Law of nature as commonly used, distinguished from Rational Law. 4. Some so called laws of nature are laws of reason.—II. Principles of Reason are laws to Will. 1. Declare what the will ought to do. 2. Right denotes conformity of action of will with law. 3. Truth as Law to will is moral law.—III. Common characteristics of Law to thought, force, and will. 185-187
- § 35. ETHICAL SIGNIFICANCE OF RIGHT AND LAW.—I. Origin.—II. Significance of Ethical Terms. 1. Ought, Obligation, Duty. 2. Right. 3. Law. 4. Authority. 5. Government. Moral Law distinguished from statute law.—III. Ethical principles are of the highest certainty . 187-190
- § 36. MORAL LAW UNIVERSAL, IMMUTABLE, IMPERATIVE.—I. Because it is truth of Reason known as law to action.—II. Implies the existence of God, the Absolute Reason.—III. Falsehood and absurdity the intellectual basis of wrong doing.—IV. Law requires conformity to the constitution of things.—V. Transgression must issue in failure and loss.—VI. Enforced by penalty.—VII. Answer to the objection that intuitive ethics is void of significance. 190-193
- § 37. INTUITIVE ETHICS DISTINGUISHED FROM FALSE THEORIES.—I. Theories of association of ideas.—II. Theories attempting to derive the idea of right from happiness.—III. That moral distinctions originate in the feelings.—IV. Hutcheson's theory of the Moral Sense.—V. That moral distinctions rest on the will of God.—VI. That truth and law are eternal in the nature of things independent of God. 193-203
- § 38. THE FORMAL PRINCIPLE OF THE LAW AND THE REAL.—I. The formal principle of the Law.—II. The Real Principle.—III. The significance and necessity of the formal principle. 1. Gives the distinctively ethical ideas. 2. Declares the real principle to be law. 3. Gives the aspect of virtue as obedience to law or doing duty. 4. Gives the aspect of virtue as harmony of the will with reason. 5. Recognizes virtue as harmony with God and the constitution of the universe.—IV. Significance and necessity of the real principle. Without it no knowledge what the law requires. Without it duty, if known, would be done without love. So done it is debasing as a blind obedience. The will consents to the formal principle only in the act of love. 203-207
- § 39. EVIDENCE THAT THE REAL PRINCIPLE OF THE LAW IS THE LAW OF LOVE. I. So declared by Christ.—II. The rational ground is that man exists in a

rational system. In such a system selfishness is absurd.—III. Knowledge of the moral system being presupposed the knowledge of the law of love is by rational intuition. 1. Arises on occasion in experience in a particular case and is operative before it is recognized or formulated. 2. The application varies with the conception of the system. 3. Its full Christian meaning presupposes the idea of a universal moral system under one God. 4. Sin and evil in self-isolation.—IV. Man's subjection to the law of love indicated in his constitutional sensibilities. Egoistic and altruistic sensibilities.—V. Verified in experience. 1. The solidarity of mankind a fact known in experience. 2. That obedience to law of love promotes the highest good is verified by experience. 3. The theory that the good is attained in selfishness logically issues in pessimism. VI. Confirmed by the common consent of mankind. 1. Practically recognized when not formulated. 2. Acknowledged by thinkers whose principles it contradicts. 3. Attested by deniers of Christianity. 4. Confirmed by scholarly investigation of religion, philosophy and literature.—VII. Objections: 1. No agreement in moral sentiments. Agree in principle differ as to its application. The same act of different significance in different cases. 2. Savage tribes destitute of moral ideas. If so, undeveloped; children of larger growth. No evidence sufficient to establish it. Testimony of Anthropologists. 207-226

CHAPTER X.

THE PERFECT: THIRD ULTIMATE REALITY OR IDEA OF REASON.

- ‡ 40. ORIGIN AND SIGNIFICANCE OF THE IDEA.—Implies a rational standard. Is the Norm for the realization of all creations of mind. 227
- ‡ 41. IDEALS.—I. Definition. Distinguished from a conceit of fancy.—II. The material given in experience, the creation guided by Reason; a creation not a copy.—III. Nearer to perfection than the object. Truth to nature.—IV. Possible only by virtue of reason.—V. Practical importance of ideals. 227-230
- ‡ 42. BEAUTY AS KNOWN BY THE REASON, OR PRINCIPLES OF ÆSTHETICS.—I. Beauty defined. 1. Is perfection revealed. 2. Revealed in some concrete object. 3. Revealed in a finite object. 4. Objects are beautiful in different degrees.—II. Beauty the outshining of truth.—III. Beauty distinguished by the modes of existence in which it is revealed.—IV. All beauty is spiritual beauty. 1. Reveals a spiritual ideal. 2. True of beauty of nature as well as of beauty of art. Nature a medium for the expression of spiritual ideals. 3. Beauty of the human form analogous to that of natural objects. 4. Higher type of beauty of the human form. 5. The Cosmos beautiful as the expression of a pervasive spiritual presence. 6. Admission of Evolutionists compared with the rational philosophy.—V. Beauty has objective reality.—VI. Beauty manifested only to rational beings. In what sense the mind creates the beauty which it perceives.—VII. Universal standard of beauty. 1. Authority: Goethe, Plato, Geo. Eliot. 2. Inferred from principles already stated. Analogous recognition of the universal reason in all science. Unity of speculative, ethical, and æsthetical philosophy. 3. Models. 4. Objections.—VIII. Sublimity.—IX. The ugly.—X. Æsthetic emotion consequent on intellectual idea. 230-243

§ 43. <i>ÆSTHETIC EMOTIONS</i> .—I. Distinguished from other feelings, natural or rational.—II. Prompts to share with others.—III. The mind is in the attitude of a seer; emotion in view of the expressiveness of things. IV. Emotions with which æsthetic emotions are often improperly confounded. 1. Wonder. 2. Certain merely agreeable sensations. 3. Pleasure of excitement.—V. Emotions of sublimity.—VI. Emotions awakened by the ugly.	243-248
§ 44. <i>ÆSTHETIC CULTURE</i>	248-250
§ 45. <i>ÆSTHETICS AND THEISM</i>	250-251
§ 46. <i>ERRONEOUS THEORIES</i> .—I. Variety of them. Burke's.—II. Theory of Association.—III. Theory of Prof. A. Bain.	251-255

CHAPTER XI.

THE GOOD: THE FOURTH ULTIMATE REALITY KNOWN THROUGH THE REASON.

§ 47. <i>THE QUESTION STATED</i> .—I. Definition of terms: happiness, well-being. II. Occasion of the rise of the idea of good and evil.—III. Necessity of a criterion.—IV. Two answers as to what is the good and its criterion. 1. Hedonism: good is enjoyment measured by quantity. 2. Good is worth estimated by rational standard.—V. The empirical and rational elements.—VI. The greatest good and the true good.	256-258
§ 48. <i>HEDONISM IS FALSE</i> .—Various ethical theories more or less Hedonistic. I. Necessary outcome of Sensationalism; incompatible with Rationalism.—II. False maxim that the ultimate motive is the desire of happiness. 1. Every desire has its specific object. 2. Motives are many, not merely one. 3. Any one passion may gain ascendancy. 4. Incompatible with free-will. 5. Incompatible with subjectivity of happiness. III. False maxim that all pleasures are of the same kind. 1. Enjoyments discriminated: by their sources; by their tendencies. 2. Enjoyments not essentially good and may be evil. 3. Enjoyments distinguished as to essential worth. 4. Common sense rejects the Hedonistic maxim.—IV. Hedonism gives no test to discriminate superior good from inferior, as to degree.—V. Incompatible with distinction of right and wrong.	258-266
§ 49. <i>THE GOOD ESTIMATED BY REASON</i> .—I. The rational standard defined.—II. The rational idea is that of worthiness or worth.—III. Presupposes the ideas of the true, the right, the perfect.—IV. Distinction of good from evil, eternal and immutable.—V. Error of Ethics confounding the good and the right.—VI. The question as to the true good distinguished from that as to the highest good.—VII. Worth estimated by reason distinguished from value in political economy.—VIII. Good is the object acquired, not the object served. Teleology.	266-271
§ 50. <i>IN WHAT THE GOOD RATIONALLY ESTIMATED CONSISTS</i> .—I. In what the essential good consists. 1. Personal perfection. Inference from the foregoing. Begins in right moral character. Right choice the essential germ of character is good in itself. Development of all the powers to perfection. Realized only by action in love. No absolute perfection to the finite but progressive. 2. Harmony with himself, with God, and	

- the constitution of things. 3. The happiness necessarily resulting. 4. These three distinguishable but inseparable. 5. Stoicism excluding happiness is false. False ethics resulting. Objections of Hedonism are against this error. Hedonism excludes the rational element of good; Christian Ethics recognizes both elements.—II. Relative good.—III. The evil. Essential. Relative.—IV. A man's good is in his own power. 271-281
- ‡ 51. MERIT AND DEMERIT.—I. Definition.—II. He that merits true good attains it. 1. Because reason is supreme in the universe. 2. Every right act receives immediate reward. 3. Answer to objection from the inequalities of this life. 4. The true good is the highest good. 281-283
- ‡ 52. THE FEELINGS PERTAINING TO THE IDEA OF THE GOOD.—I. The feelings presuppose the idea.—II. Subdivisions: 1. Self-respect. 2. Prudential. The two are called self-love. 283-284
- ‡ 53. PRACTICAL IMPORTANCE IN THE CONDUCT OF LIFE. 284-285

CHAPTER XII.

FIFTH ULTIMATE IDEA OF REASON.

- ‡ 54. THE ABSOLUTE.—I. Definition.—II. Known by rational intuition arising in the effort to complete the process of thought in any line of investigation. In the back-ground of human consciousness and at the basis of knowledge. Opens a new sphere of reality.—III. What the absolute is, is known not *a priori*, but only in its accounting for man and nature. The absolute is the All-conditioning. Kant's objection. Significance if explained as the registered experience of the race transmitted by heredity. 286-288
- ‡ 55. THE PSEUDO-ABSOLUTE.—I. The Pseudo-absolute; some forms originate in attempting to develop the idea *a priori*; others from developing it empirically; the sum total of all things mistaken for the Absolute; also the largest logical concept.—II. Current objections founded on false ideas of the Absolute. 1. The Absolute is "pure being" "the thing in itself," "out of all relations." 2. Objections founded on the false idea of the Absolute as "the ALL," or sum total of all things. 3. Agnostic objection that personality is incompatible with the absolute. 289-291
- ‡ 56. PERSONALITY OF THE ABSOLUTE.—I. The Absolute may be a person.—II. The Absolute must be a person. 291-292

CHAPTER XIII.

THREE GRADES OF SCIENTIFIC KNOWLEDGE.

- ‡ 57. DEFINITION OF SCIENCE. 293-294
- ‡ 58. THE THREE GRADES DEFINED.—I. First Grade: Empirical Science. Its two divisions.—II. The Second Grade: Noetic or Rationalistic science. Why called Noetic. Three divisions of it. 1. Mathematics. J. S. Mill that Mathematical axioms learned by experience. 2. Logic. 3. Philosophy. Subdivisions: Speculative, Ethical, Æsthetic, Teleological.—III. Third Grade: Theology.—IV. Must pass through all three in the complete knowledge of any being.—V. Knowledge in each grade is science. Appropriation of "science" to natural science only. 294-301

- § 59. PROOF OF THE DOCTRINE.—I. From the constitution of the mind. 1. Why it begins as Empirical science. 2. Why two spheres of mind and matter opened in perceptive intuition. 3. Rational intuition necessitates noetic and theological.—II. Common recognition in history of thought. III. Reciprocal dependence. 301-304
- § 60. HARMONY OF THE THREE.—I. Science in a lower grade, depends on the principles of the higher. 1. Empirical science depends on rational intuitions. 2. Noetic science depends on Theology. 3. Theology contains its principles in itself.—II. Science in a higher grade depends on the lower for content. 1. Noetic science depends on empirical for content. Also for discipline in empirical methods. 2. Theology depends on noetic and empirical science. Cannot develop the idea of the absolute *a priori*. Misrepresentation of Theological method. 3. Source of contents of Empirical.—III. Science in a lower grade raises questions for science in a higher grade to answer. 1. Empirical. 2. Noetic. Theology ultimate.—IV. Also depends on the higher grade, to complete the unity of thought and things.—V. Scientific thought legitimately culminates in Theology.—VI. Science in a higher grade stimulates inquiry in the lower.—VII. Claim that empirical natural science alone is science.—VIII. Science in the three grades must be in harmony with itself. 304-319
- § 61. THE ALLEGED CONFLICT OF NATURAL SCIENCE AND THEOLOGY.—I. Arises only from error or ignorance. 1. From incompleteness of knowledge incidental to its progressiveness. 2. From error of method. 3. From the claim of science in one grade to be the whole of knowledge.—II. Reconciliation possible only by correcting error and attaining knowledge of truth. 1. How to meet the exclusive claim of natural science. 2. The alleged error of method. 3. How to treat conflict arising from ignorance or error.—III. The alleged historical antagonism exaggerated. 1. The great natural scientists have been believers. 2. Theological antagonism to scientific discovery comparatively rare. The real influence of Christianity on civilization. 3. Discoveries more opposed by scientists than by theologians.—IV. Correction of theological opinion to meet discoveries in science.—V. Principle as to the competence of non-scientists to reason on scientific discoveries.—VI. Legitimate to oppose atheism and agnosticism promulgated under the guise of science. 1. Because the promulgator transcends empirical science. 2. Danger of a scientific hierarchy. 3. Legitimate moral interest in opposing atheism. 4. Is not opposition to science but to atheism.—VII. No extraordinary reason for alarm now. 1. Overlooking God's action in it. 2. Skepticism not more prevalent now than in former epochs of skepticism. 3. Epochs of skepticism incidental to the progress of Christianity. 4. Christian progress destroys no truth. 5. Common representation of existing decay of faith exaggerated. 319-344

CHAPTER XIV.

THE SENSIBILITIES.

- § 62. DEFINITION AND CLASSIFICATION. I. Definition: motives and emotions. II. Classification: Natural or Psychical and Rational. III. Natural or Psychical exemplified. 1. Instincts. 2. Radical impulse to exertion. 3. Appetites and desires. 4. Natural affections; sympathetic and repellent. IV. Rational sensibilities; five classes. 345-347

- ‡ 63. THE DESIRE OF HAPPINESS AS A MOTIVE.—How it may be so. So far as it is a ruling motive, it is morbid and hurtful. 347-348
- ‡ 64. FEELING AS A SOURCE OF KNOWLEDGE. 348

CHAPTER XV.

THE WILL.

- ‡ 65. DEFINITION.—I. Definition of the will.—II. The determinations of the will. 1. Determinations of two kinds: choice and volition. Self-directive and self-exertive. 2. Distinguished from causal efficiency. 3. Distinguished from sensibilities. 4. Distinguished from determinations by the intellect. III. Power constituted will by being endowed with rationality. Name of the mind itself. Energizing or practical reason. 349-351
- ‡ 66. CHOICE AND VOLITION.—Determinations self-directive and self-exertive. I. The distinction is real. 1. Recognized in consciousness. 2. Essential to freedom and responsibility.—II. Choice further explained. 1. The object chosen always the object of action. 2. Choice presupposes comparison. The choice a simple indefinable determination, known directly in consciousness. Error of Hazard and Bowen that the comparison is all. Signs or manifestations of choice are volition and complacency. 3. Choice is an abiding determination. 4. Choices; supreme and subordinate.—III. Volition further explained: Exertive or executive. Resolution, purpose, intention, immanent volition.—IV. Volition not a complete determination but is the expression of a choice. 351-357
- ‡ 67. ETHICAL APPLICATION.—I. Object of supreme choice always a person or persons. Two spheres: Object to get, persons to trust and serve. In the former the good is the ultimate end. This cannot be the supreme object: further question, for whom. A person is an end in himself of trust and service. The good is nothing real except as the good of a person.—II. Object of right supreme choice is God in the moral system. Objection that the right supreme choice is consent to reason. The object of a wrong supreme choice. Trust and service of persons the entire activity of man.—III. The love required in the law is a free choice. Distinguished from love in popular use.—IV. Moral character primarily in the supreme choice, and secondarily, state of the intellect, sensibilities, habits.—V. Christian ethics contrasted with modern illuminism. 357-361
- ‡ 68. FREEDOM OF WILL.—I. Definition. 1. Inherent in rationality. 2. Does not imply consent of will to reason. 3. Freedom as inherent in rationality different from Edwards.—II. Determination distinguished from strongest impulse.—III. Knowledge of free-will of the highest certainty. 1. Appeal to consciousness. 2. Has the criteria of primitive knowledge. 3. Proof from human history. 4. Involved in being endowed with reason. 5. Denial of free-will is the denial of moral responsibility. 6. As an hypothesis free-will accounts for the facts.—IV. Objection to free-will commonly founded on false theories of knowledge.—V. Objection that man is determined by Cosmic agencies. 1. Countries under similar cosmic agencies develop unlike civilizations. 2. The same country in different periods has unlike civilizations. 3. The true progress. 361-376

- § 69. FREE-WILL AND MAN'S IMPLICATION IN NATURE.—I. In what sense implicated in nature.—II. Also endowed with reason and therefore free. III. Freedom from control of circumstances a matter of fact. 1. May resist natural impulses or concur. Plato's chariot. 2. Under any circumstances may do right. 3. May reverse the motive. 4. May change his circumstances. 5. May avail himself of aid from men. 6. May avail himself of aid from God. 7. A limited power to control the effects of Cosmic force on the body. 8. Controls the forces of nature to effect results. Natural selection displaced by man's selection. Man the Lord of nature. Psalm viii.—IV. Implication in nature indicates him above nature. Nature not a boundary but a sphere. Senses open the realm of nature to perception. This the occasion of rational intuition. Reveals his reason to himself and the universe to his reason. Similar thoughts as to will, reveals sphere of action and power to act. Death a liberation. Man the end of nature. The spiritual body and the power of mind. 376-386
- § 70. DIFFERENT MEANINGS OF FREEDOM.—Moral, physical, real and formal freedom. 386-389
- § 71. THE INFLUENCE OF MOTIVES.—The question stated.—I. Definition of motive.—II. The motive not the efficient cause of determination. The will is the cause. No causative act between the will and its determination. The argument of Edwards. Hamilton's argument from antinomies.—III. The motive does not determine the will.—IV. The action of motives on the will is influence. V. Determinations always made under the influences of motives.—VI. The common formulas of the influence of motives ambiguous and worthless.—VII. The uniformity of human action not thus explicable. 389-396
- § 72. CHARACTER IN THE WILL.—I. A choice constitutes character.—II. Determinations influence subsequent determinations.—III. Voluntary action a continual formation of character.—IV. Man always free to change his supreme choice.—V. After a character is acquired determinations are not transition from complete indetermination. 396-399
- § 73. THE UNIFORMITY OF HUMAN ACTION.—I. Uniformity sufficient to be the basis of confidence.—II. Law of averages cannot explain it.—III. The uniformity actually existing is consistent with free will. 399-402
- § 74. SOCIOLOGY AND FREE-WILL.—Sociology may be consistent with free-will.—I. Sociology denying free will cannot be science.—II. Sociology will never reduce human acts to mechanical and chemical laws.—III. Sphere for Sociology compatible with free will. 402-407

CHAPTER XVI.

PERSONALITY.

- § 75. DEFINITIONS.—I. Person and Impersonal.—II. Moral Agent.—III. Nature and the supernatural. Man personal though implicated in nature. Lotze's explanation. Duke of Argyll's objection. Different uses of the words nature and supernatural.—IV. Spirit. Theological conception of its relation to space. May act through material organisms. Matter and Spirit not antagonistic. Matter; its old use and its use now. Materialism of this day defined. The doctrine of spirit. 408-414

- ‡ 76. MAN IS A PERSON.—Certainty of the knowledge. 414
- ‡ 77. MAN IS SPIRIT. Conditions of possibility of materialism.—I. Spirit necessary to account for facts of personality. 1. Difference of properties. 2. Accords with methods of physical science. 3. More evidence of Spirit than of atoms, etc. 4. Accords with dynamic tendencies.—II. Necessary to account for the physical universe. It is not mere mechanism. Gravitation not explained by persistence of force. Similar difficulties in cohesion and chemical affinity and all interaction of bodies molar or molecular.—III. Scientists recognize need of some power above matter. Universe more analogous to an organism than to a machine.—IV. Materialism cannot account for and explain the facts either of matter and force or personality.—V. Conclusion that man is spirit. 414-427

CHAPTER XVII.

MATERIALISTIC OBJECTIONS TO THE EXISTENCE OF PERSONAL BEINGS.

- ‡ 78. FIRST MATERIALISTIC OBJECTION; FROM SENSATIONALISM.—Subjective Materialism.—I. Inconsistent with materialism. Inconsistent with Spencer's Agnosticism. Materialism inconsistent with Spencer's Agnosticism. These theories commonly confounded.—II. Inconsistent with physical science.—III. Is self-contradictory. Matter defined only by relation to mind and mind only by relation to matter. Issues in medieval jargon. Spencer's transfigured realism.—IV. Difficulties removed only by existence of spirit.—V. The source of materialism in popular unscientific impressions. 428-434
- ‡ 79. SECOND MATERIALISTIC OBJECTION THAT MENTAL PHENOMENA ARE CORRELATED WITH MOLECULAR ACTION.—I. The objection stated. II. Explanations. 1. That mental action is accompanied by molecular action and waste of brain not denied; but materialism cannot account for the connection. 2. Not necessary to prove that finite spirit ever exists and acts apart from a material organ. 3. Not necessary to deny that vitality is correlated with motor-force.—III. The correlation not sustained by physical science. 1. Mental phenomena cannot be identified with motion. 2. If energy is transformed into thought it disappears. 3. The energy in the molecular action transformed into physical movements. A "closed circuit" with mental phenomena excluded. 4. This refutes materialism.—IV. Physical explanations of mental phenomena inconceivable. 1. Registration of sensations in memory. 2. Unity of consciousness and identity. 3. The multitude of registrations. 4. Explanation by registration transmitted by heredity.—V. Physical science has no explanation of mental phenomena. Dogmatic materialism impossible.—VI. The existence of spirit explains the phenomena and avoids the difficulties. 1. Physical science limited in two directions. 2. Existence of spirit transcends the limits. Energizing Reason. 3. Necessity of assuming the existence of personal spirit. 4. Elements of the idea given in the knowledge of self. 5. Objection that we have no experience of disembodied spirit. 6. Objection that mental phenomena must be resolved into molecular motion in order to be cognizable by science.—VII. Correlation of facts of personality with motion is incompatible with the facts themselves. 434-454

- § 80. **THIRD MATERIALISTIC OBJECTION: FROM EVOLUTION.**—The Objection stated.—I. Distinguish materialistic evolution from scientific.—II. Evolution as a law of nature not scientifically established. 1. The law conditions all other laws. 2. The four subordinate theories not scientifically proved. 3. Laws of Evolution not scientifically exact. 4. Evolutionists while regarding the universe as mechanism, substitute the idea of organic growth in carrying out their theory.—III. Scientific Evolution consistent with personality of man and God. 1. It does not involve materialism. 2. Not inconsistent with personality of men. 3. Not inconsistent with moral law. 4. Consistent with Theism.—IV. Scientific Evolution no help to materialism and itself discredited if held as necessarily materialistic. 1. Evolution factual, Materialism metaphysical. 2. Evolution removes no difficulties of materialism in accounting for physical universe; proves them irremovable. 3. No aid to materialism in making mind a function of matter. Leads to the contrary conclusion. 4. Materialistic evolution gives no basis of good morals. First: No data for constructing an ethical theory. Secondly: Only law deducible for determining conduct is immoral, viz: Might makes right. Thirdly: No basis for rights of individuals in relation to the State. Fourthly: No practically effective motives to virtue. Fifthly: Immoral tendency. Sixthly: Contradicts moral intuitions. 5. Issues in the extinction of personality; lapsed intelligence. 6. Materialistic evolution unscientific.—V. Scientific Evolution at every stage reveals a supernatural power. 1. Implied in the meaning of it as scientists use it. Incompatible with materialistic evolution. 2. If mind is to act through matter, the matter must be prepared to be its organ. Analogy of generation. 3. Accords with a universal law of the elaboration of matter in preparation for manifesting a higher power. The elaboration not yet completed. Existence after death. 4. Planes or grades manifesting successively higher powers. First, manifesting mechanical force. Second, chemical force. Third, vital force. Fourth, sentient life. Fifth, personality. Are distinct. Higher power acts on next below; not on still lower grades. 5. Force in a lower grade does not create force in a higher. Beginning of motion. Every interaction. Beginning of elemental or chemical force. Beginning of life. Conditioned on previous life. Beginning of sensitivity, and of human personality. Lower force held in abeyance by the higher. 6. Matter in the higher grades does not originate but reveals the higher power. 7. Evolution a continual revelation of hypermaterial power. Concurrence of different schools of thought. Evolution incompatible with materialism. 8. Appearance of Personality. 9. Conclusion.—VI. Evolution, if true, demands a personal God. Evolution emphasizes the teleological argument. 1. Presupposes always a higher power revealing itself. 2. In this higher power the powers evolved exist potentially. 3. The Absolute Being is a rational or personal being; is the Absolute Reason. 4. Finite beings have real existence distinct from the Absolute. 5. In what sense the universe created by God. Evolution presents no peculiar objection to creation. Evolution requires creation. 6. God immanent in the universe. 7. God's action in creating, sustaining and evolving is individuating. 8. God's action the continuous realization in the finite of an ideal eternal in the Absolute Reason. 9. God's action expressing the ideal or plan of Reason is progressive. 10. God's action in the universe uniform and continuous according to law. Objection that theism supposes capricious will in nature. 11. The Moral system

gives a sphere for endless progress which is impossible to materialism.

12. Objections by Spencer and others. 455-537

‡ 81. FOURTH MATERIALISTIC OBJECTION, FROM ATTRIBUTES OF BRUTES.—

I. All the mental qualities of brutes are qualities of men.—II. Man has also the attributes of personality which brutes have not in any degree.

1. Different qualities in intellect, sensitivity and will. 2. Brutes lack these attributes of personality. 3. The higher attainments of man impossible to brutes.—III. If any animals have attributes of personality it

would prove only that those animals are persons, not that men are brutes, nor that all animals are persons.—IV. Man though implicated in nature, is supernatural. 1. Objection that brute sensitivity not correlated with motion. 2. Unscientific to affirm that life is merely a mode

of motion. 3. The difficulties removed by theistic evolution.—V. Man is spirit; the brute is not. Objection that all brutes, even the infusoria, must have souls. Threefold classification of man as body, soul, spirit unnecessary. Lewes' objection that the spiritual hypothesis unscientific.

Spencer's objection from babes and savages. 537-554

CHAPTER XVIII.

THE TWO SYSTEMS OF NATURE AND PERSONALITY.

‡ 82. A PERSON'S KNOWLEDGE OF OTHER PERSONS.—I. What person or spirit is, is known only in consciousness of self. Empty speculations as to the origin of the idea.—II. Man has knowledge of personal beings other than himself. 1. The denial of this involves agnosticism. 2. Basis for this knowledge in Kant's philosophy. 3. Involved in perceptive intuition. 4. When personality is known in self it can be recognized in others. 5. Mistakes of savages as to the Supernatural no objection. 6.

Objection from anthropomorphism. 555-559

‡ 83. THE TWO SYSTEMS.—Man knows himself in each. 560

‡ 84. EXISTENCE OF THE PERSONAL GOD A NECESSARY DATUM OF SCIENTIFIC KNOWLEDGE.—The key-stone in the arch of rational knowledge.

—I. Necessary to trustworthiness of human reason.—II. Necessary to the community of knowledge.—III. Necessary to the completeness of human thought. To solve the ultimate and necessary problem. To the unity of the system of nature. To the unity of the natural and moral system. No antagonism between the two systems. Sin the only evil and only essential antagonism. Conflict not between spirit and matter. The good progressively prevails over the evil. The new birth of the creation. 560-564

THE PHILOSOPHICAL BASIS OF THEISM.

CHAPTER I.

INTRODUCTORY.

§1. Design of the Book.

A CHRISTIAN man knows God in his own experience; all that is of highest worth to man in life rests on his experience of God's gracious presence and power in his own moral and spiritual development. In the strength of such knowledge many a Christian has lived a life of Christ-like love or gone to a martyr's stake, who never attempted to define or defend the articles of his belief. And the spontaneous religious beliefs of ruder men rest on what they have felt and known of the presence and power of the supernatural in and about them. Thus the knowledge of God begins, like the knowledge of nature and of man, in experience.

But since man is rational he cannot rest permanently in this spontaneous belief. As he advances in intelligence and intellectual development, he must reflect on what he thus believes, must define to himself what it is, and interpret and vindicate it to his reason as reasonable belief and real knowledge. This must be done if religious belief is to commend itself to thinking persons; it must be done anew from generation to generation if, in every period of intellectual activity and of advance in knowledge and culture, Christianity is to retain its preëminence as the light and inspiration of human life and the universal religion of mankind. The knowledge of God, like the knowledge of man and nature, begins in experience, and is ascertained, defined and systemized in thought. Even where God transcends our knowledge, we at least mark definitely the limits of the known. In this transition from spontaneous to reflective knowledge, questions of two classes arise. First are the questions: Have we

knowledge of God? What are the sources of this knowledge? How can we vindicate its reality and validity against objections? Then come questions of a second class: Admitting that God exists, what do we know of him, and what is the practical significance of the reality known of him to us and to mankind? The answers to these questions of reflective thought constitute Systematic Theology. Accordingly this is naturally and conveniently treated in two parts: Fundamental Theology, which answers the questions of the first class; Doctrinal Theology, which answers the questions of the second class.

But in answering these questions we find underlying them fundamental questions which must be answered and fundamental principles which must be ascertained. If the student begins with asking, Why am I a Christian? he is forced back on the question, Why am I a theist? For Christianity presupposes the existence of God, and declares that he has revealed himself in redemptive action coursing through human history, and especially in Jesus the Christ. And when he asks, Why am I a theist? he is forced back on questions which reach to the profoundest depths of human thought. Among these are questions as to the reality, the processes and the possible sphere of human knowledge; the principles and laws of thought; the capacity of man to know God; the distinction between empirical science, philosophy and theology, and their necessary harmony; the basis and nature of moral distinctions and of moral law and government; the capacity of man as a free agent to be a subject of moral government and to love, trust and obey God; the distinction of the personal and the impersonal, the natural and the supernatural, spirit and matter; the real existence of personal beings and the materialistic objections thereto; the synthesis of the personal with the absolute; the reality of the two systems, the physical and the moral, and their harmony and unity in the universe of God. These and similar questions necessarily arise in the attempt to translate our spontaneous, indeterminate, unreasoned knowledge of God into knowledge rationally defined, interpreted and vindicated; for God is the absolute Ground of the universe, and the rational setting forth of our knowledge of him and the vindication of it as real knowledge must bring us down to the principles which are at the foundation alike of all thought and of all things. Christian faith in God may exist without answering or even asking these questions. But when skepticism forces them on the thought, it is necessary to investigate and answer them in order that the intellect may thread its way through the labyrinth, into which it finds itself thrust, of doubts, perplexities and objections confused in tortuous and mazy ways, and may come, with faith now illumined through and through with intelligence, to the presence and vision

of God, to an intelligent and restful conviction that the universe is grounded in Absolute Reason energizing in perfect wisdom and love, and that this Energizing Reason is God.

The examination of the personality of man is necessary also in answering theological questions of the second class and setting forth what we know of God and of his relations to the universe. Accordingly theologians in their system of doctrine have their chapters of anthropology not less than of theology. Communion between God and man is of the essence of religion. Therefore the knowledge of man, not less than the knowledge of God, is necessary to the right understanding of religious truth. Misapprehension of the personality of man and of the rational principles involved in it has always been a fruitful source of erroneous theological doctrine.

This volume is not designed to present in detail the evidence of the existence of God; it is designed to examine the constitution of man as a personal being in order to ascertain his capacity to know and serve God, to answer the philosophical questions involved in the controversy with skepticism, agnosticism and materialism, and to set forth, clear from misapprehension, and vindicate the principles on which the defence of theism must rest. It is not intended to be a treatise on psychology, ethics or metaphysics. I have given psychological definitions and classifications so far as they are necessary to explain my use of terms. Aside from this I have confined myself to those topics, the right exposition of which is of critical significance in deciding the controversies now rife between Christian theism and unbelief in its various forms, and in the discussion of which I have hoped to contribute something to the clear and exact apprehension and the true and convincing answer of the questions at issue.

§ 2. Necessity of this Investigation.

In what has been already said we see urgent reasons for this investigation. Its necessity is further evident from the following considerations.

I. The fundamental question of theology is, does a personal God exist? Preparatory to even asking the question the theologian must ascertain what personality is. But man cannot have even the idea of personality unless he has first found the elements of it in his own being. Therefore he cannot inquire respecting the personality of God, till, by studying the constitution of man, he has found out that man is a person, and thus has ascertained what personality is and what is the distinction between persons and impersonal beings.

II. The question with the atheist is ultimately the question as to the reality of knowledge. Atheism, in its usual forms, is founded on the

denial of the capacity of the human mind to know God. It does not assert positively, There is no God; but only that man is incapable of knowing that God exists.

Some atheists have indeed asserted positively that God does not exist. This was asserted by Chaumette and Clootz in the first French Revolution. It is not only asserted, but the assertion is made the basis of a proposed political and social revolution and reorganization, by the Nihilists and by many of the Communists. This assertion, however, involves the assumption that man has capacity to know God, has also the true idea of him, knows also all the evidence of his existence which the universe contains now or ever has contained or ever will contain, and knows also that the evidence is inadequate and that God does not exist. This form of atheism assumes as its basis the omniscience of the atheist; for if he does not know everything, that which he does not know may be God, or the evidence of God's existence which would convince the atheist. A negation involving such absurdity cannot enter the field of intelligent debate. It is the atheism of ignorance, prejudice and passion.

Atheism, which rests on intelligence sufficiently to admit debate, can go no further than to deny the capacity of man to know God, to declare that therefore the existence of God is not a legitimate object of inquiry or investigation. We are met at the threshold and warned off from theology as inaccessible to knowledge and shut against exploration. When we discuss a question of history or astronomy, both parties appeal to knowledge, examine facts, and decide according to evidence. But in discussing the existence of God, the atheist admits no appeal to knowledge and to evidence. If God exists, no evidence can prove his existence to us. He is out of all relation to our faculties; and whatever idea we may form of him cannot be the correct idea; for any idea formed by our faculties cannot be the true idea of a reality out of all relation to our faculties.

Thus atheism forces us at once on the investigation of the nature and extent of man's capacity of knowledge. The question between theism and atheism is not the question whether there is evidence that God exists; it is the question whether the human mind is competent to know Him.

The theories of knowledge, on which atheism, in its different forms, rests its denial that man can know God, are various. They are usually theories denying the knowledge of God but admitting the reality of knowledge in other spheres. Such are the various forms of phenomenalism; the theories of the relativity of knowledge; the physiological psychologies, which, crediting man's lower powers to the discredit of the higher, regard the senses as the only source of knowledge; the

denial of the validity of rational intuition and of metaphysics; the patronizing recognition of religion as legitimate in the feelings and the imagination but excluded from knowledge. In all these forms of atheism the primary subject of debate is not the existence of God, but the theory of knowledge on which the denial of the knowledge of God is founded.

I expect to show that every theory of knowledge which is the intellectual basis of atheism involves in its essence complete agnosticism or universal skepticism. This necessary issue is usually hidden, often from the atheist himself, in what claims to be a theory of knowledge. But every theory of knowledge which affirms the impossibility of knowing God, will be found on examination to deny at some point the trustworthiness of man's intellect in its normal exercise and so to involve complete agnosticism. It will be found to be a theory which can be defended and justified only by appealing to objections which equally justify universal skepticism or complete agnosticism.

This fatal issue of all these theories is easily kept out of sight. Skeptical objections which are regarded as of great force when urged against theology, are often disregarded as frivolous when urged against other departments of knowledge to which they are equally pertinent. We are so constantly in contact with common things that, when applied to them, the fine speculations of skepticism that we know only impressions, and that knowledge is phenomenal, or is relative, or impossible, are brushed away by our senses and our common sense. But God and the realities of the moral and spiritual life are less obtrusive, and common sense does not react so instantaneously against the denial of them; therefore against these men discuss objections as formidable, which when applied with equal pertinence to common affairs or to physical sciences they disregard as quibbles.

The question with the atheist, therefore, as I expect to show, is ultimately the question as to the possibility of any knowledge whatever. If man cannot know God, he cannot know anything. Conversely, the existence of God is essential to the possibility of rational knowledge.

III. Some Christian theologians unwittingly take false and indefensible positions. They adopt theories of knowledge logically involving complete agnosticism; or they misapprehend what personality is; or they give definitions logically involving the denial of man's freedom, or of his constitutional religiousness, or even of the distinctive elements of reason, and thus accept the errors on which atheism rests. Many have attempted to construct theology in accordance with Locke's theory of knowledge and so have labored to find out God by empirical methods. An evangelical clergyman has recently published an article

declaring that in metaphysics "theory is regarded as its own verification," that "the metaphysical method was the dream of the scholastic," that if any theological doctrines "are inseparably bound up with metaphysics" they must be abandoned, that theology must "begin to adjust itself to the new conditions and transfer its doctrines to the new ground," and that "the new ground" is "the Positivism of Comte." And so we find clergymen ignorantly joining with the skeptic and ridiculing metaphysics, which investigates the first principles of reason and the universal laws of thought, as a mediæval jargon of words. Some, at the opposite extreme, have supposed the knowledge of universals to precede the knowledge of particulars and have attempted to develop all truth by the *a priori* method and thus have plunged into idealism and pantheism. Others have been so intent on the analysis of personality in man and in God, that they have crowded the unity of the person into the back-ground and have scarcely remembered that reason is the person considered as illuminated with reason, and will is the person considered as determining and energizing, and sensibility the person considered as the subject of motives and emotions; that will is reason determining and energizing, and reason is will rational. They push their analysis to disjunction. They are like the daughters of Pelias, who cut their father in pieces, but waited in vain to see him rise in youth and beauty from the witch's caldron. Hence comes a theology jejune, arid, and in conflict with itself.

Closely allied to this is the habit of abstract thinking about general notions and propositions expressed in words. Abstract thinking is always indispensable. But in proportion as it becomes dominant and exclusive it shuts out realistic thinking about concrete realities; and without the latter, scientific knowledge is impossible and the thinking issues only in words. Theologians have no more escaped this tendency than thinkers in other departments of knowledge. Since persons are concrete realities not less than things, concrete, realistic thinking is as indispensable in theology as in every other sphere of knowledge. It is commonly said that theology is exclusively occupied with abstractions; but this is no more true of theology than it is of astronomy, chemistry or sociology. So far as theologians have allowed abstract thinking to exclude the realistic, they have fallen into false thinking and inextricable embarrassments, and laid themselves open to unanswerable objections. The result has sometimes been that the very concepts, definitions, propositions and systems intended to reveal God have become a veil that hides him; formulas of doctrine have filled the eye instead of God active in human hearts and human history redeeming man from sin, the letter of a scripture instead of the living Word and the ever-present Spirit of God.

There are also theologians who assert that religion is founded only in the feelings and that it is only by a faith-faculty, distinct from the reason and rooted in the feelings, that man comes into communication with God. They overlook the fact that reflective thought in every sphere of knowledge presupposes primitive, spontaneous, unelaborated and unproved beliefs; that it presupposes intuitions, involved in the nebulousness of the primitive consciousness, which assert their regulative power only on occasion in experience and are recognized only as the mind reflects on its own action. They overlook the fact that, therefore, there is the same reason for a faith-faculty in every science as in theology. What is demanded of the theologian is that he show the synthesis of reason and faith; that he show that the primitive belief in the supernatural and in a divinity is a reasonable belief, is itself the manifestation of the reason, is the soul's consciousness of God moving in the darkness and formlessness of its own primitive feeling and intelligence. But these theologians declare a sharp antithesis and separation of reason and faith, as well as of reason and the witness of the Spirit of God in the heart of man. In fact recent theology almost overlooks the witness of the Spirit which was prominent and dominant in the thinking of Calvin and the reformers. Thus these theologians concede the whole ground to the agnostic, who admits that religion is a matter of feeling and that the imagination in each generation may shape an object for it, but denies that God or any object of religious feeling can be an object of knowledge. There are also theologians who do not recognize God as the Supreme Reason, but exalt Will to supremacy, teaching that the distinction of right and wrong results from a fiat of God's will, and thus agree with the atheist that theism makes a capricious will supreme, and deprive themselves of all answer to the objection that the order and law of nature prove the absence of will. Others teach that the principles and laws of reason are eternal and independent of God, and thus accept the atheistic position that the ultimate ground of the universe is in the impersonal or, as Hartmann calls it, "the Unconscious," and leave no place for God and no reason for His existence.

It is evident, for all these reasons, that the study of theology must begin with investigating the reality, rise, conditions and limitations of human knowledge, defining what constitutes personality, and setting forth the principles of reason on which theism rests. And of the same purport are the words of Ulrici: "Whoever undertakes to discuss the question of the existence and essence of God, must found his investigation on a definite and determinate theory of knowledge. In reference to the old doubt whether metaphysics is not all an illusion, he must ascertain whether and how far metaphysical inquiries are justified

scientifically in accordance with the ultimate grounds of being and events."*

IV. In pursuing this investigation we shall find that true metaphysics investigates and declares ideas and principles on which all science depends, and reaches results the reality of which cannot be impugned without disintegrating the results of all scientific thought. Empirical science must deal with metaphysical ideas and assume metaphysical principles as really as do mathematics, logic, philosophy and theology. The physical science of to-day rests on metaphysical ideas and principles, and is largely occupied with the discussion of metaphysical and theological questions. The complete positivism of Comte has proved itself inadequate to the needs of scientific thought and has been renounced.

We shall also find that the true theory of knowledge, while transcending the theory of Locke long dominant in English philosophy and theology, does not issue in mysticism, idealism or pantheism. It recognizes the dependence of all scientific knowledge on the observation of facts either by sense-perception or self-consciousness, as well as on the first principles of reason. It teaches that the principles of reason assert themselves in consciousness only on occasion in experience, and have no significance as knowledge, except as they are principles true of observed reality and making a scientific knowledge of it possible. Philosophy and theology depend on observed facts as really as empirical science; and empirical science depends on rational ideas and principles as really as philosophy and theology.

We shall also find that the true idea of personality is consistent with the true idea of absolute being; that man is "in the image of God;" and that this truth, announced in the first chapter of Genesis and fundamental in revelation from the beginning to the end of the Christian scriptures, is also fundamental in philosophy and in empirical science. Without it no science is possible. For if man finds not in himself the image of that Energizing Reason which is at the basis of the universe and gives it its unity under law and in systematic order, the discovery and declaration of which constitute science, then he does not find it anywhere. But if unreason and not Reason is at the basis of the universe, then science is impossible, and nothing is left but a fragmentary observation of what appears to happen, with total ignorance of what lies beyond our senses in the past, or in the future, or at the present moment in the distances of space. Hence we truly say that the consciousness of God lies in the background of man's consciousness of himself; that the true knowledge of himself involves the knowledge of God. As the late Professor T. H. Green, of Oxford, ex-

* Gott und die Natur, s. 7.

presses it, "know yourself as you truly are, and you will know the truth of God, freedom and immortality."

And we shall reach the conclusion that the reality of scientific knowledge depends ultimately on the reality of the existence of God as the Absolute Reason energizing in the universe, and the primary ground of all that is; that the knowledge of God is not merely a questionable belief to be remanded to the feelings and the imagination because it cannot be vindicated to the reason; but that the existence of Reason, universal, unconditioned and supreme, the same everywhere and always, never in contradiction to the ultimate principles regulative of all human thought, the ultimate ground of the universe and ever energizing in it, is essential to all scientific knowledge, the key-stone of the arch of all rational thought; and that ultimately the question with the atheist is not whether man can know God but whether he can know anything rationally and scientifically.

We thus reach the synthesis of faith and reason. In our spontaneous religiousness the whole man, intellect, sensibility and will, responds to the contact of the supernatural and the divine. In reflective thought the intellectual is distinguished from the emotional, the motive and the voluntary. We find that we know, not merely what we have subjectively experienced, but also that what we have experienced rests on truths and laws which are not subjective and peculiar to our experience, but are universal truths regulative of all thought and laws to all action; and thus that our faith is veritable knowledge and itself the utterance of reason. Even the primitive religiousness of savage men is an utterance of reason though not recognized as such, and though distorted by ignorance, and false judgments and fear. The richer experience of the Christian is a consciousness of God manifesting itself in the spiritual life, transcending, illuminating and enriching the most advanced knowledge, culture and civilization. This also is the utterance of reason, though it may be still unrecognized as such. It is only because man is endowed with reason that he is susceptible of religion and conscious of the presence and influence of God.

The knowledge that the thoughts set forth in this volume have already been helpful to some, the hope that they will throw light into some dark places, will make some difficult subjects more intelligible by presenting them from a new point of view, will remove some misapprehensions as to what Christian theism truly is, and so may help some still mazed in the labyrinth of doubt, are the motives for publishing this book: "*Non ignarus mali, miseris succurrere disco.*"

CHAPTER II.

KNOWLEDGE AND AGNOSTICISM.

§ 3. What Knowledge is.

Knowledge implies a subject knowing and a reality known (objective or subjective). The knowledge is the relation between them. Both a subject knowing and a reality known are essential to knowledge; if either is wanting, knowledge is impossible. This is the first law of thought.

Knowledge is always the knowledge of reality. This is of its essence; if it is not the knowledge of reality, it is not knowledge. The validity or reality of knowledge is essential in the idea of knowledge. Knowledge is the intellectual equivalent of some reality.

The act of the mind in knowing is a primitive act incapable of analytical definition. It cannot be explained any more than light can be illuminated. It is the inexplicable act by which the mind takes up a reality into itself in an intuition, an apprehension, an idea, in some intellectual equivalent, and knows it. We can declare the conditions, physiological or others, under which knowledge arises; we can analyze the processes by which the mind attains it. But the mental act itself by which an object, external and unknown, suddenly stands clear and definite within the intelligence, remains a mystery. And all physiological facts as to its connection with molecular action of the brain leave it as mysterious as ever.

What knowledge is, is known in the act of knowing and known only in the act of knowing. That it is knowledge is also known in the act of knowing. My certainty of a reality is simply my consciousness of knowing, which, whether attended to or not, is essential in every act of knowledge. "I know that I know" means no more than "I know." Otherwise every act of knowledge would be conditioned on an act preceding and knowledge would fail in a vain regression along an infinite series.

§ 4. Agnosticism.

Agnosticism is the doctrine that the human intellect in its normal exercise is untrustworthy and incompetent to attain knowledge; and

that therefore knowledge is impossible to man. The doctrine has also been known in philosophy by the names Pyrrhonism, Nihilism and Universal Skepticism.

It is not the denial of the possibility of knowledge in a particular case for lack of evidence, or on account of the limitation of the human mind. In affirming that man's knowledge is real we do not affirm that it is omniscience. Reality may exist known to minds of a superior order, but entirely beyond the range of the human mind in its present development. It is one important aim of philosophy to determine the necessary limits of human knowledge and so to prevent the waste of intellect in vain attempts to know the unknowable.

Agnosticism is a denial that the human intellect is trustworthy; it is the consequent denial that man is competent to attain knowledge within the range of his faculties and in the normal exercise of all his powers. He may have necessary beliefs in accordance with which he must think; but he can never have confidence that his necessary belief is trustworthy or that by any intuition or any reasoning he attains knowledge of reality.

It follows that a partial agnosticism necessarily involves complete agnosticism, and is therefore self-contradictory and untenable. If at one point the intellect is found to be false and untrustworthy, that is the discovery at that point of a falsity and untrustworthiness which discredit the intellect at every point and invalidate all that is called knowledge. For example, if the intellect in the normal exercise of its powers persistently and necessarily believes a certain self-evident principle or axiom, and yet with equal persistence and necessity believes another self-evident principle contradictory to the first, it is exposed as false and self-contradictory and discredited in all its action. The agnostic may assert a partial agnosticism while admitting the reality of knowledge in other particulars; but it is only because he has not thought far enough to see the reach of his denial. The partial necessitates the complete agnosticism.

§ 5. The Reality of Knowledge.

This topic is sometimes designated "The Validity of Knowledge," and the discussion is of the question "Is Knowledge Valid?" But validity is of the essence of knowledge; invalid knowledge is no knowledge. The question, therefore, resolves itself into this: "Is knowledge real? Does man know anything?" This form of statement clears away irrelevant matter and holds attention to the precise point in question.

I. The reality of knowledge is a primitive datum of consciousness

underlying and conditioning all human experience and essential in all human intelligence.

1. The reality of man's knowledge of himself and his environment is a primitive datum of consciousness. This is implied in the first law or primordial postulate of thought: knowledge implies a subject knowing and an object known, and is the relation between them. When I say knowledge is real, I simply formulate in thought the primitive consciousness, "I know." But this primitive consciousness, "I know," declares alike, "It is I who know," and "I know something." Thus the primitive datum of consciousness that knowledge is real involves, as of the essence of knowledge, the reality of the Ego or subject knowing, and the reality of the object known; for if either is unreal the knowledge does not exist; and thus it involves the reality of the knowledge in its essential significance. In every act of knowledge, man's knowledge of himself as knowing is an essential element, and without this there can be no knowledge. Thus his whole conscious activity in experience is a continuous revelation of the man to himself. It is the same with the object known. In every moment of consciousness man finds himself knowing something that is not himself. The existence of an outward object is a datum in all his consciousness; and his whole conscious experience is a continuous revelation to him of the outward reality; and if this is not real all knowledge vanishes. H. Spencer says, "The co-existence of the subject and object is a deliverance of consciousness which, taking precedence of all analytic examination, is a truth transcending all others in certainty."*

By the testimony, the words and the works of other men we know that human knowledge is always in like manner the knowledge of the subject knowing and an object known. I may say that the entire experience of mankind is the continuous revelation of these realities to the human consciousness, and that all human experience is conditioned on their real existence. Man lives in their presence and in every act of intelligence sees their reality. If, therefore, the primordial postulate on which human knowledge rests is false, all human knowledge vanishes away.

Thus it appears that the reality of knowledge is a primitive datum of consciousness underlying and conditioning all human experience and essential in all intelligence.

But, it will be said, this is not a demonstration of the reality of knowledge. The assertion is true. Knowledge cannot originate in reasoning, for reasoning presupposes knowledge. If we must prove everything we cannot prove or know anything. For the same reason

* Psychology, Vol. i. p. 209.

we cannot prove the reality of knowledge by reasoning. We can reason to what is unknown only from what is known. We cannot dive beneath all that is known and in the vacuum of total ignorance prove the reality of knowledge itself. We can reason only by the use of our own intellectual faculties. We cannot transcend these faculties to prove that they themselves are trustworthy. If one denies the reality of knowledge no proof can refute the denial. Every reason urged in proof of the reality of knowledge assumes that reality and derives all its force as an argument from the assumption. Every reason urged to prove that our intellectual faculties are trustworthy, can be a reason only because those faculties are trustworthy. It is therefore illegitimate and useless to attempt to prove the reality of knowledge or the trustworthiness of our intellectual powers. So far as this question is concerned, we do well to say with Goethe, "I have never thought about thinking." The speculation which entangles itself in this fruitless discussion merits the mockery of Mephistopheles in Faust: "I tell thee, a fellow who speculates is like a beast on a dry heath driven round and round by an evil spirit, while all about him lie the beautiful green meadows."*

Nor does it discredit the reality of knowledge that its evidence is not a demonstration. It is more than a demonstration; it is the very essence of knowledge itself; it is the primitive datum which underlies every demonstration and makes it possible. Man lives in the light of the knowledge of himself and of the world, and all his experience is the continual illumination of these realities.

Nor does it discredit the reality of knowledge that it is subjective, and that the mind itself contributes an element in the knowledge. If an intelligent being exists, he must be constituted with capacity of knowing; and when he reflects on himself, he must find in himself that original capacity, and the act of knowing must be the warrant and evidence of the power of knowing. No outward influence on a stick or stone can make it know, because it is not constituted with a capacity of knowing. It can be no objection to the reality of knowledge that knowledge is the act of a being constituted with the capacity of knowing and that it is by virtue of this constitution that the being knows. When the subjectivity of knowledge is urged against its reality, the absurd objection is flatly propounded that knowledge is impossible if there is an intelligent being who knows.

The primordial postulate is not from the beginning formulated in

*"Ich sag' es dir; ein Kerl der speculirt,
Ist wie ein Thier, auf dürrer Heide
Von einem bösen Geist im Kreis geführt,
Und rings umher liegt schöne grüne Weide."

the words, "knowledge is real," or "our intellectual faculties are trustworthy." It exists, rather, in every act of knowledge, as the man's unenunciated consciousness of himself as knowing, of an object known, and of the knowledge. It is a waste of intellect to carry the question through metaphysical discussion. This postulate which underlies all human experience, conditions all human knowledge, and is the primitive datum of all consciousness, admits of no debate. Knowledge begins with knowing; it reveals itself self-evident, as light reveals itself by shining. It originates as knowledge, the perpetual miracle of Minerva springing full-armed from the brain of Jupiter.

2. The reality of man's knowledge of the first principles which are regulative of all thought is a primitive datum of consciousness. Man finds himself unable to think in contradiction of them. They overarch and encompass his thinking like a luminous firmament, which enlightens but cannot be transcended or escaped. It is the knowledge of these principles underlying and conditioning all thinking, which makes it possible from any process of thought to conclude by inference in knowledge. Thus in the experience of life all thinking is a continuous revelation of these truths and of the reality of our knowledge of them. In a similar manner we come to the knowledge of truths which are obligatory on us as laws to the will.

3. I expect also to show, what I will merely indicate now, that the reality of our knowledge of God is a primitive datum of consciousness. Man being rational is so constituted that in the presence of God, and of his various manifestations of himself, he will know him; and he will know that he knows God in the act of knowing him. In thinking of himself and the beings about him, he comes in view of the absolute being. In knowing the universal principles and laws of reason which are regulative of all human thinking and doing, he comes to the knowledge of absolute Reason in which they are eternal in the fullness of wisdom and love. The development of man's consciousness of himself in his relation to the world, is the development of his consciousness of God. As in the experience of life, the unfolding consciousness of man is a continuous revealing to him of himself and of the outward objects of knowledge, so also it is a continuous revelation to him of God. The revelation is real to all; its right progress presupposes the normal development of man; its completeness, rightness and harmony will be proportioned to the completeness, rightness and harmony of the development of the man.

4. The realities which I have considered are the elements of the three objects of all human thought and knowledge, the Ego or person, the World, and God. These are not mere ideas spun and woven from the processes of our own minds. They do not exist because we know them;

we know them because they exist. I exist; therefore, being constituted capable of self-consciousness, I know myself in my own thinking and doing, and therein know personal being. The world exists; therefore, being constituted capable of perceiving outward objects, I know them when they are in my presence. God exists; therefore, being constituted capable of knowing God, I know him in His various manifestations.

5. It is sometimes claimed that real knowledge is that alone which is founded on experience. But the reality of knowledge, which is the condition of the possibility of experience, cannot be founded on experience. We may truly say, however, that the entire development of consciousness in the experience of human life is the continuous revelation of the Ego, the World and God. Kant admits that in our moral convictions we have content in consciousness for the idea of God already known as a necessary idea of Reason. God also reveals himself in the knowledge of universal principles and in all spiritual motives and emotions; for these bring us face to face with the absolute Reason in the fullness of its power, love and wisdom. In this sense we may say that we know the Ego, the world and God in experience.

It is commonly said and widely accepted as unquestionable, that physical science, being founded on observation and induction, is certain knowledge; but that theological belief is only a faith which never becomes real knowledge. But physical science and religious knowledge are, as knowledge, the same in kind, differing only in their objects. The observation and experience on which physical science rests are self-evident, unproved and unprovable knowledge. The principles on which all the inductions and deductions of physical science rest are self-evident, unproved and unprovable knowledge; such are the principle that every beginning or change of existence has a cause, the principle of the uniformity of nature that the same complex of causes always produces the same effect, and the axioms of mathematics. And its verifications also are simply self-evident, unproved and unprovable knowledge by cumulative observation and experience, by persistence in which in the face of conscious fallibility and many mistakes, it attains what it rightly claims is real and indisputable knowledge. And this scientists call the scientific method; and because this knowledge has been attained in this method, they hold it for true in the face of unanswered objections and the utter inconceivableness of many of its conclusions; receiving it with all its inexplicable difficulties, as a learned professor of natural science has said, "without a wink." But the process of attaining theological knowledge is just the same. It rests on the trustworthiness of the self-evident and unproved primitive knowledge of observed facts and universal principles, just as physical

science does. It rests on the experience and observation of mental and spiritual phenomena as indisputable as the phenomena of sense, and essential and dominant factors in the whole history of man; phenomena which physical science confessedly fails to account for, and which it therefore most unscientifically ignores as beyond the pale of science. It also proceeds in its own sphere to verify its conclusions by cumulative observation and experience, and in the face of conscious fallibility and many mistakes attains to real knowledge. And it rightly holds it as real knowledge in the face of unanswered objections and unexplained mysteries. Thus physical science is founded in faith in the same sense in which theological knowledge is so founded; because its knowledge both of facts and of the universal principles underlying all its reasoning is self-evident, unproved and unprovable knowledge. And theological knowledge is founded in experience as really as physical science is.

We properly accept this knowledge both of the natural and the spiritual as real knowledge because its reality as knowledge is a primitive datum of consciousness, even if we rest on that as an ultimate fact. But theism gives also rational ground for the reality of knowledge. For theism affirms that God is the Absolute Reason, and the universe is the expression of the truths, laws and ideals of Absolute Reason and the progressive realization of the ends which reason approves as worthy. The constitution of the universe therefore expresses these archetypal principles of Absolute Reason. Theism also teaches that man is in the image of God; his reason, then, however limited, is the same in kind with the absolute Reason; and Reason whether in God or man is everywhere and always the same. Thus theism gives rational ground of the reality of human knowledge. It gives rational ground for a man's knowing the reality of his knowledge when he translates the facts of the universe even to the remotest space and time into his own intellectual and scientific forms, factual and rational; when he assumes that the necessary principles of his reason are not merely subjective and regulative of his own thinking, but are principles of reason everywhere and always the same, the laws of things as well as thought, and thus finds them in the constitution of the universe. It gives rational ground for the postulation of the correspondence of man's knowledge with the reality of nature, of the uniformity of nature which is the basis of scientific induction, of the identity of plan in it which is the basis of classification, analogy and systemization, and of the objective universality of the primitive principles of reason which regulate all thought. It gives rational ground of the reality of scientific knowledge in declaring the common origin of the universe and all beings in it in the power of God, the eternal Reason,

energizing in its creation and expressing in its constitution and in the laws of its ongoing, the archetypal thought of his eternal love and wisdom.

If it is necessary to the reality of human knowledge that all knowledge be demonstrated, or that the mind knowing must have a power above itself to criticise its own highest powers and judge of their trustworthiness, or that it must know reality out of all relation to its faculties and compare with it what it knows by its faculties, or that knowledge must have no relation to a mind, then certainly knowledge is impossible to man. But each of these demands involves absurdity and self-contradiction.

We see then that man has knowledge. His knowledge begins in experience as self-evident, primitive knowledge, it proceeds to the knowledge of realities beyond experience by processes of thought under the regulation of self-evident and universal principles, and it issues in the knowledge of God and of the universe in the unity of a rational, scientific system through its relations to God. And, theism, when attained, throws its light back on human knowledge, and by disclosing God the absolute Reason, man in his image, and the universe as the expression of his thought, enables us to look beyond the fact that the reality of knowledge is an ultimate datum of consciousness and see the eternal ground of its being so.

II. Agnosticism belies the constitution and consciousness of man, debars itself from the possibility of argument in its own support, and contradicts and nullifies itself.

Because it denies knowledge on the ground that human intelligence is untrustworthy, it denies the possibility of knowledge and thus equally denies all knowledge. If man knows anything whatever, he is proved capable of knowing, and agnosticism is totally false. I have already explained why agnostic objections are entertained against theology more commonly than against knowledge in other spheres; but logically and rationally, theology is no more invalidated by these objections than astronomy or chemistry, or than a man's knowledge of the road home, or that he was once born, or that the beast he rides is a horse and not a sheep. As equally denying all knowledge, agnosticism is equally powerless against all.

It contradicts the fundamental and universal consciousness of man, which persists as the consciousness of knowing, and controls the entire action of mankind not excepting those who propound agnostic speculations. If one should carry out in action the doctrine of agnosticism, it would prove him insane.

Agnosticism precludes the possibility of argument or evidence in its support. Argument and evidence presuppose knowledge. It is impos-

sible to appeal to knowledge in proof that knowledge is impossible, or to reason to prove that reason is irrational and untrustworthy

The affirmation of agnosticism is self-contradictory; it is the affirmation of knowledge and implies its reality. Agnosticism is a theory of knowledge. Hegel says: "No one is aware that anything is a limit or defect until at the same time he is above and beyond it."* An ox cannot know that it is ignorant of the multiplication table and incompetent to learn it. If man were incompetent to know he would be equally unconscious of his deficiency. If I say that my beliefs are delusive and not knowledge, I assume that I know what true knowledge is, and by comparing my own beliefs with it I know that they are illusive. If I say that my intellectual faculties are untrustworthy, I assume that I am conscious of a higher faculty by which I know the norm or standard of truth and judge my other faculties untrustworthy. Hegel's maxim is applicable also to partial agnosticism. If I affirm that I have knowledge only of phenomena, not of the true reality which exists as a "thing in itself" out of all relation to my faculties, I assume a knowledge of the "thing in itself" and of phenomena as distinguished from it. When Mr. Tyndall says he has no faculty and no rudiment of a faculty by which he can know God, he already reveals the faculty of knowing him. If the existence of an object involves no contradiction and I can form a conception of it, then I am competent to know it if evidence of its existence comes within the range of my experience and my thought. When Hamilton and Mansel affirm that we have only a negative knowledge of the Absolute (which is no knowledge), and Spencer affirms that the Absolute exists but is the unknowable, they are already looking over the limits of the finite and know the Absolute as existent being. If they had no power to know the Absolute, they would be as unconscious of their ignorance as an ox is of its ignorance of geometry. Accordingly Hamilton teaches that we cannot know the Absolute, yet that by an entirely unexplained act of faith we believe in its existence and accept it as the supreme object of worship, love and obedience. When Mr. Spencer speaks of "the unknowable," he unwittingly reveals knowledge of it by describing it as "the Absolute," as "Cause, Power, or Force of which every phenomenon is a manifestation," as "some Power by which we are acted on," as "omnipresent" and "persistent."† So others, who deny that man can know God, refer to sin and suffering in the universe as incompatible with his existence and thus assume knowledge of God and of how he would have constituted and governed the universe, if he had existed.

* Encyklopädie, Vol. I. p. 121.

† First Principles; pp. 96, 98, 99, 258.

The affirmation of agnosticism is also in itself an affirmation that man has knowledge; he knows that he cannot know anything. If agnosticism were proved true, at the same moment it would be proved false, for it would be proved that we know the truth of agnosticism. Augustine has exemplified this contradiction in a passage which almost dizzies the reader by its rapid turns. "I am most certain that *I am* and I know this and delight in it. In respect to these truths I am not at all afraid of the arguments of the Academicians who say: 'What if you are deceived?' If I am deceived, *I am*. For he who *is not*, cannot be deceived; and if I am deceived, by this token *I am*. And since *I am*, if I am deceived, how am I deceived in believing that *I am*? for it is certain that *I am*, if I am deceived. Since, therefore, I, the person deceived, should *be*, even if I were deceived, certainly I am not deceived in the knowledge that *I am*. Consequently neither am I deceived in knowing that *I know*. For as I know that *I am*, so I know this also, that *I know*."*

If the Agnostic says that he does not dogmatically deny the existence or reality of everything or anything, but only affirms his ignorance, he at least avows knowledge of his own ignorance and of himself as ignorant. Ignorance itself is knowledge of something by a person knowing, with the additional knowledge that the knowledge of that something is limited.

If he says that he does not affirm even his own ignorance, but that his mind is in a state of continuous skepticism, doubting, questioning, in a continuous equipoise, neither believing nor disbelieving, still he affirms his knowledge of his own skepticism; also, some knowledge is prerequisite to the possibility of skepticism, questioning or doubt. And such an equipoise is a state of unstable equilibrium, the existence of which in the conscious experience of man even on a single question is comparatively rare. We may safely say no man was ever permanently conscious of such an equipoise on all objects of thought.

Agnosticism is therefore self-contradictory and self-annulling. It is not a legitimate topic for argument, and has no claim on the consideration of any rational being. It continues in debate only because skepticism thrusts it on us in its objections. Otherwise its discussion is no more pertinent as preliminary to theology than to astronomy.

III. Any theory of knowledge, any system, or any proposition, which involves agnosticism, is thereby proved false and has no claim to further consideration.

There is little danger that agnosticism will find acceptance when distinctly avowed as such. It is not likely to infect men's minds except as it inoculates with its virus some theory ostensibly affirming

* Civitas Dei, Book' xi. 26.

the reality of knowledge, but essentially involving universal agnosticism and supported by objections which, if sustained, equally invalidate all knowledge. It is a sort of intellectual *trichiniasis* which can be communicated to man only through the "style of Epicurus" or some other. It must hide itself in some theory which in words affirms the reality of knowledge, in order to conceal the unreason which is its essence and to disguise the deadliness of the negation which it injects.

But however disguised, every theory, system or proposition, which essentially involves agnosticism, is demonstrated to be false so soon as the agnosticism essentially involved in it is exposed.

For example, while reality may exist unknowable by man in his present condition and development, we positively know that no reality can exist out of all relation to the human faculties in the sense that it is contradictory to the necessary and universal principles which are regulative of all human thinking, nor in the sense that it is the only reality and that all which man knows is phenomenal and not real. For this involves agnosticism. *MAN CAN KNOW NOTHING*

Another example is found in the phenomenalism of this day. Prof. Clifford says, "If we were to travel forward as we have travelled backward in time and consider things as falling together, we should come to a central all, in one piece, which would send out waves of heat through a perfectly empty ether and gradually cool down. As this mass got cool it would be deprived of all life and motion. But this conclusion, like the one we discussed about the beginning of the world, is one which we have no right whatever to rest on. It depends on the same assumption, that the laws of geometry and mechanics are exactly and absolutely true and that they will continue exactly and absolutely true forever and ever. Such an assumption we have no right whatever to make."* But if the mathematics on which astronomers rest their calculations is not the mathematics of the planets and the stars and if our geometry is not the geometry of all space, then our astronomy is good for nothing. By thus denying the universal truth of mathematical principles Prof. Clifford destroys the foundation of physical science, and by discrediting the principles of reason, discredits all human knowledge. And thus phenomenalism is proved false, because it necessarily terminates in agnosticism.

§ 6. Knowledge and Fallibility.

One may be certain and yet afterwards find that he was mistaken; he may be sure that he has true knowledge of reality and afterwards find that it was only an erroneous belief. J. G. Fichte "developed, with most admirable rigor of demonstration, a scheme of idealism, the

* Lectures and Essays, Vol. i. p. 224.

purest, simplest, and most consistent which the history of philosophy exhibits. And so confident was he in the necessity of his proof, that on one occasion he was provoked to imprecate eternal damnation on his head, if he should ever swerve from any, even the least of the doctrines which he had so victoriously established. But even Fichte in the end confesses that natural belief is paramount to every logical proof, and that his own idealism he could not believe."* Hamilton was sure that Fichte had confessed himself mistaken; but he himself may only have believed an error; since others, perhaps better acquainted with Fichte's writings, insist that his later works are the consistent development of his earlier. Similar experience is common to all men. Every person has often believed to be true what others with equal assurance have believed to be false; has been certain that he had true knowledge of reality, and afterwards has found that it was only an erroneous belief.

It is objected that facts like these disprove the possibility of knowledge; that when one has found himself mistaken in his certainty, he can never be certain again. He will say, I have before assuredly believed that I had true knowledge of reality and have found myself mistaken. If I am equally certain now, how can I have confidence that I shall not again find myself mistaken? Therefore, the objector argues, even if a belief is true, it can never be known to be true; it cannot be discriminated from false belief. But belief which cannot be known to be true is not knowledge; it is uncertainty or doubt; and the objector concludes that therefore knowledge is impossible.

I. I reply that the objection, if valid, proves complete agnosticism. Therefore it is not entitled to the attention of rational beings and may be dismissed from further consideration.

It is, however, a favorite objection of skeptics against philosophy and theology. Like all agnostic objections it is urged as having a special significance against these, though of equal force against all knowledge. Mr. Lewes has written what he calls a History of Philosophy for the avowed purpose of proving from the mistakes, uncertainties and disagreements of philosophers that philosophy is impossible. The objection is specious and sometimes perplexes sincere inquirers. It is necessary, therefore, to delay a little in order to show that the co-existence of knowledge with conscious fallibility is entirely reasonable, and no necessary inconsistency exists between them.

II. The objection assumes as a fact what is contrary to the universal consciousness of man.

It is not a fact that the consciousness of having been mistaken precludes certainty. The man is at least certain that he was mistaken.

* Hamilton in Reid's Works, p. 796.

It is according to common experience and observation that the mistakes which men discover do not prevent certainty afterwards, even in respect to the subject about which they know they have been mistaken. But the objection rests on the assumption that certainty under this condition is impossible. The objection thus assumes as a fact what is contrary to the universal consciousness of man.

III. The fact that man is constituted capable of knowing and at the same time finite is a rational ground for the persistence of knowledge after the discovery of mistakes and for the co-existence of knowledge with conscious fallibility. Man cannot cease to be conscious of knowing unless he divests himself of his own constitution; yet being finite, his knowledge must always be limited and can be increased only by progressive acquisition. In acquiring knowledge he is liable to mistake. As constituted rational he is capable of knowing; as finite, he is liable to mistake. The objection implies that the reality of knowledge is proved by reasoning and may be disproved by argument; but the knowledge that I know is inseparable from the rational constitution of man; it persists through all mistakes and dissolves them into knowledge, like a perennial spring whose living water flows through the snow which obstructs it and dissolves it into its own swelling volume.

The objection, therefore, implies that finite or limited knowledge is impossible. It insists that an infallibility which precludes all mistakes is a necessary prerequisite, and the consciousness of it a necessary element of all knowledge. But such infallibility implies omniscience. The objection then is simply the absurdity that the knowledge of everything is a necessary prerequisite to the knowledge of anything, and that the consciousness of omniscience is an essential element of all knowledge. And for this nonsense we are asked to acknowledge that all human knowledge is unreal. The objection belongs to that type of thought which denies the reality of finite being and insists that the only reality is in the Absolute Being.

IV. In human intelligence there is a nucleus of knowledge surrounded by a zone of probability, opinion and doubt. In the nucleus of knowledge having the highest certitude there is no mistake; mistakes are in our reflective thinking on this knowledge, in our interpretation of it and inferences from it, from which comes the zone of probability, opinion and doubt.

When I am in pain I may mistake its cause, but I cannot mistake as to the fact of pain. I may mistake as to the shortest road home, but I cannot mistake, if I understand the terms, as to a straight line, being the shortest distance between two points. I may know with indefectible certainty that darkness is not light, or that two and two make four, though aware that I have sometimes mistaken the

light of the rising moon for that of the rising sun, or have incorrectly added a column of figures.

The changes of belief alleged as proving knowledge unreal are often found on examination to be changes of opinion never held as certain. There has been a rapid succession of changes in the science of geology for many years; but the changes have been in theories devised to account for the facts rather than in belief of the facts themselves. Or, changes in scientific teachings are of conclusions from hasty or incomplete induction or deduction, or from insufficient observation, accepted provisionally as probable until further investigation gives certainty. These theories and conclusions are often put forth and received as science; but intelligent persons hold them only as opinions or theories having as yet no claim to scientific certainty. There is nothing in a change of opinion or theory to throw doubt on the reality of knowledge, although such changes are often used as facts by which the objector would prove the instability and uncertainty of all human beliefs.

In many other cases the change is of a belief which has never been scrutinized and formulated, and whose grounds and reasonableness the believer has never investigated.

V. Through all mistakes and changes of opinion the great mass of knowledge persists. The changes of belief are steps in an enlargement and confirmation of knowledge, not in its subversion and destruction.

The primitive knowledge, which gives the material for thought and the laws which regulate thinking, necessarily persists. Aside from the primitive knowledge, the greater part of acquired beliefs persist; as my beliefs that I was once born, that the Roman empire once existed, that wheat is nutritious food, that a certain neighbor is not a drunkard. Many of these beliefs are continually receiving confirmation from experience.

The same is true of scientific beliefs. The recent discovery by astronomers that they were mistaken as to the exact distance of the sun from the earth is not accompanied by any change in the great mass of astronomical knowledge. It is not true that man's beliefs are in continual transition and flux. The mass of them persist as knowledge; the ocean remains though the waves are always rising and breaking and falling on its surface. Physical Science is advanced, with many a mistake, by the cumulative evidence of persistent observation and experience, and inferences therefrom.

The same is true of changes of spontaneous belief when scrutinized by reflective thought. A man grows up in the religious belief of his childhood, without inquiring as to its grounds. The first objection of skepticism disconcerts and distresses him; and as new difficulties are

suggested, he is ready to think all his religious faith and hope must be abandoned. But as he proceeds to investigate, he may find, as multitudes have done, that the objections are not valid, that his belief rests on reasonable grounds. Thus his belief returns, sustained and confirmed by reason, clearer, stronger and more reasonable for the doubts which it has looked in the face and found to be unreasonable. It has sent down its roots to the depth where is perpetual moisture, and its leaves no more wither and it does not cease from bearing fruit. In this sense it is true that the way to true belief is through honest doubt.

If the objection were urged on an astronomer that the repeated and great changes in astronomical systems prove the untruthfulness of all astronomical science, he would reply that this objection was the denial alike of reason and of common sense. And rightly; for in its greatest changes, like the transition from the Ptolemaic to the Copernican systems, astronomy has brought along with it into the new system a multitude of truths and facts already known in the old, and but for the knowledge of these it could not have advanced to the new system. It is simply an enlargement and growth of astronomical knowledge, not its extinction.

The empirical scientist, if candid, will allow the same explanation of changes in philosophy and religious belief which he gives for those in empirical science. In urging this objection, the objector commonly includes agnosticism in philosophy and urges it as proving that philosophy is self-contradictory. But both empirical science and philosophy presuppose the reality of knowledge, and agnosticism is no more a part of the latter than of the former. This error in applying the objection being corrected, certainly the differences and changes of opinion and the controversies attending them in philosophy are scarcely more numerous and frequent than in physical science. And as through all changes of physical science, so through all the changes of philosophy a mass of truth common to all philosophy is carried forward and becomes greater and clearer in the progress of philosophical thought. Renan says, "Who knows if the metaphysics and theology of the past will not be to those which the progress of speculation will one day reveal, what the Cosmos of Anaximenes is to the Cosmos of Laplace and Humboldt?"* And in philosophy as in physical science, the differences and the changes of belief have been steps in the enlargement and completion of philosophy, not in its subversion and destruction.

The same is true of religious belief. It has been well said, "Nothing has been so disputed about in the world as the Christian religion, unless it be nature itself. It is because, more than anything else, it has

* *L'avenir Religieux des Sociétés Modernes, sub finem.*

the simplicity and complexity of nature.”* There is truth common to all religions. In the divisions of Christianity the beliefs held in common are usually more in number and more important than the beliefs which differ. Because religion is life, and the decay of religious life is attended with decay of religious belief, the problem of the progress of religious knowledge is more complicated than the progress of science, and a sinking from a greater knowledge to a less and from belief of truth to belief of error is more likely; yet even in religious knowledge the changes of belief have been predominantly incident to the enlargement of the knowledge. It is not the Christian who goes back to polytheism, nor the polytheist who goes back to fetichism, any more than the Copernican goes back to the Ptolemaic system of astronomy, or the chemist from belief in oxygen to belief in phlogiston. And as men have advanced from the lower types of religion to the higher, they have brought with them whatever of their religious beliefs remained true in the presence of their enlarged knowledge, and have sloughed off only those which had been exposed as errors.†

Fetichism recognises the supernatural every where in nature. Polytheism does not cease to recognise the supernatural in nature, but recognises it with more intelligence as divinities distinct from nature, energizing in its several realms and through its mightiest powers. When in the Roman Empire polytheism was carried to its extreme development, when an infant had one guardian divinity in its sleeping, another in its rising, another in its crying, and another in its walking, when in the growth of wheat, the germinating, the growth of the blade, the forming of the joints in the stalk, the setting of the grain had each its separate divinity,‡ this was the recognition of the divine presence, activity and care in all nature and in all human life. Monotheism perpetuated this truth and clarified and enlarged it in the knowledge of one personal God pervading the universe with wisdom and love, and ordering all its courses for the realization of the highest rational ends. The gods that had crowded the world vanished and the world was filled with the fullness of God.

* E. D. Mead, “Carlyle,” p. 27.

† Unter der Hülle aller Religionen liegt die Religion selbst.—*Schiller*.

‡ Vaticanus the deity that opens the infant's mouth in crying; Levana lifts it; Cunina watches over the cradle; Rumina brings out the milk; Potina presides over its drinking; Educa over the supplying of food.

Seia cares for the grain when sown beneath the ground; Segetia for the rising blade; Proserpina for the germinating of the seed; Nodutus presides over the formation of the joints and knots; Volutina over the sheaths infolding the stalk; Patelana over the opening of the sheath; Flora over the flowering; Lacturnus over the grain while in the milk; Matuta over the ripened grain; Tutilina over the harvesting; Runcina over the removal from the soil; Spiniensis over rooting out the thorns; Rubigo protects from mildew.—*Augustine Civitas Dei, Lib. iv. 8, 21.*

During the first Christian centuries the Roman polytheists were outgrowing their ancient religion and were introducing from the East religions that might better meet their wants. Before his conversion to Christianity, Constantine was a believer in one God, the Sun-God of the Persians.* When he saw the cross on the Sun, it signified to him that the Christian's God, who is a spirit, in righteousness and mercy redeeming the world from sin to Christ-like love, is superior to the Sun-God whom he had worshiped, and must rightfully displace him. Whether the story is historically true or not, its significance and pertinence remain unchanged.

Thus under all ignorance, doubt, probability, and all changes of belief is knowledge of reality, which from childhood to age in the individual and from century to century in mankind is becoming larger and clearer and is putting away errors in its growth. And though other errors spring up, they are incidental to investigation and to progress in knowledge, not effective of its subversion and destruction. The legitimate influence of mistakes is not to annul our knowledge, but to lead us to greater carefulness and thoroughness of investigation.

All this is only saying that man, though limited, is constituted intelligent and rational, that is, with the power of knowing; that he can enlarge his knowledge and clarify it from errors by observation and reflection, and that the pursuit of knowledge is a legitimate function of the human mind, and not, as Lessing has represented it, an ineffectual seeking prosecuted for the mere pleasure of the search, a fruitless hunt prosecuted for the mere excitement of the chase.

§ 7. Criteria of Primitive Knowledge.

The question now arises whether there are criteria by which we can discriminate among our beliefs those which are primitive and true knowledge of reality from those which are not. It has already been shown that we know that we know only in the act of knowing. Therefore the only possible criterion must in some way be knowledge itself. Four criteria, consistent with this restriction, may be named.

I. The first criterion is of course the knowledge itself as it rises clear and convincing in its own self-evidence; it is the self-evidence of the knowledge. This is the true significance of the criterion of Descartes: "Having observed that there is nothing whatever in this, '*I think therefore I am*,' which assures me that I say the truth, save only that I see very clearly that in order to think it is necessary to be, I concluded that I could take for a general rule that things which we conceive very clearly and distinctly are all true things."† That is, knowledge is real

* Uhlhorn, Conflict of Christianity and Heathenism.

† Oeuvres Vol. iii. p. 90, Principes de Philosophie.

and true when it stands in the mind clear and distinct in its own self-evidence and asserts itself as knowledge.

II. The second criterion is the impossibility of thinking the contrary to be true. This is merely the first criterion reversed. The positive knowledge is tested by an effort to reject it and believe the contrary. If it is found impossible, the reality of the knowledge is more clearly disclosed. It is analogous to testing the strength of material, first by a direct strain, then by a transverse.

This test is commonly applied to the universal and self-evident principles which regulate all thought; for example, it is impossible to think of space as discontinuous, or to think of both of two contradictory propositions as simultaneously true. In these cases it is impossible to think the contrary as true in any place or time or under any circumstances or conditions.

The test is equally applicable to knowledge of a particular reality present to consciousness here and now; for example, my knowledge that I feel a pain. In such a case it is possible to think the reality to be unreal at another place and time or under other conditions; but so long as it is present in consciousness I can no more think it to be absent, or unknown or unreal than I can think that a thing may be and not be at the same time. In the knowledge of a primitive and universal principle the impossibility to thought of its contradictory is universal. In the knowledge of a particular fact the impossibility to thought exists only in a particular place and time and under particular conditions. Herbert Spencer states it thus: "In the one instance the antecedents of the conviction are present only on special occasions, while in the other they are present on all occasions. In either case, subject the mind to the required antecedents and no belief save the appropriate one is conceivable. But while in the first case only a single object serves for the antecedent, in the other any object, real or imagined, serves for antecedent."*

The fact that this second criterion is the converse of the first is important, especially in its application to the primitive beliefs of universal principles which are regulative of all thinking. It implies that these beliefs do not result from intellectual impotence, as Hamilton teaches in respect to the causal judgment, but from positive knowledge. The belief of the principle does not result from impotence to think the contrary, but the impossibility of thinking the contrary results from the self-evident and positive belief. It is not a negation of knowledge arising from incapacity to think, but knowledge so positive that it carries in itself the consciousness that it is impossible to think the

* The Universal Postulate; Westminster Review, Oct. 1853. See also his Psychology, §§ 426-437.

contrary. It therefore gives no basis to the doctrine that God is unknowable, which is inferred from Hamilton's theory of mental impotence.

It must also be noticed that that which is impossible to thought or unthinkable must be distinguished from the inconceivable, whether by the inconceivable is meant the unimaginable, or that which is not conceived in a logical concept or general notion. This distinction is important because it is often urged by agnostics that because God is inconceivable he must be unknowable.

If by the inconceivable is meant the unimaginable, that which cannot be pictured in the imagination, we need not look far to discover that the thinkable and knowable is not restricted to the conceivable. A person blind or deaf from birth knows that there are people who see and hear, that there are light and color and sound. But the blind man cannot picture light and shade and color to his imagination, nor the deaf man sound. Dr. Maudsley says of Kruse, who was completely deaf, that "musical tones seemed to his perception to have much analogy with colors. The sound of a trumpet was yellow to him; that of a drum red; that of the organ green."* So it is possible to think of a being endowed with a sixth sense, although it is impossible to imagine what the revelations of the sense would be. I know there is a branch of Mathematics called Quaternions, but I cannot picture its methods to my imagination because I have not used them. The general notion *horse* is thinkable and knowable; I can denote it by a symbol, spoken or written; but it is not imaginable; if I try to picture it to the imagination I get only a particular horse, of a definite size, color and action. It is idle then to argue that whatever is inconceivable in the sense of unimaginable is therefore impossible to thought and cannot be known as real.

If by inconceivable is meant that which cannot be formed with other individuals of the same kind into a general notion, it is also evident that what is possible to thought and knowledge is not restricted to the conceivable in this sense; because the knowledge of the individual precedes the knowledge of the general notion; the knowledge of the general notion is conditioned on the knowledge of the individual.

Therefore this second criterion must not be understood as affirming that a belief is true when its contrary is inconceivable, but only that it is true when the mind in its reflex action on its own knowledge, finds it impossible to think its contrary as real or true under the existing conditions; and, in the case of intuitions of primitive and universal principles, finds it impossible to think the contrary true under **any**

* Physiology and Pathology of the Mind, p. 45.

conditions; finds in fact that the assertion of the contrary would be nonsense, words used without meaning. Thus the common objection of agnostics that God is unknowable because in either or both of these senses he is inconceivable, is seen to be without force.

III. The third criterion of knowledge is its persistence in face of all efforts of reflective thought to disprove it. By the persistence of belief in face of objection, ratiocination, and all reflective thought upon it, the mind ascertains that it is impossible to think the contrary and that the belief stands impregnable in its clearness and evidence as knowledge.

This persistence may appear in two ways. It may appear as persistence of intellectual assent notwithstanding all argument against it. It may also appear as persistence of spontaneous belief practically controlling action, even when, as the result of speculative thinking, it is conceded that the belief is untenable and its contrary is affirmed as true. Thus the idealist continues to be practically controlled by belief in the real existence of bodies, and the materialist by the belief that he is a free and responsible agent.

In applying this principle we may refer to the persistence of knowledge in our own individual experience, and also in the experience of mankind. We are not, indeed, to decide between the true and the false by the votes of a majority. But in investigating the experience of mankind we are not seeking to decide any question by votes, but simply to ascertain what are the persistent, essential and primitive elements of human intelligence. There is difficulty here in ascertaining the facts; for the multitude of men have given us no information as to their conscious experience. But from observation, literature and history we have attained a large knowledge of the characteristics of humanity, and the researches of anthropologists are continually increasing it. From these sources it is possible to ascertain what sentiments and beliefs are found persisting in all the experience of man. And if we find knowledge either of a particular reality or of a universal principle which has been an element in all human experience, has consciously or unconsciously controlled all human thinking, and has persisted through all the changing conditions and progress of man, this persistence we accept as a mark of primitive, self-evident knowledge springing directly from the human constitution and revealing the external environment common to all mankind.

It may be objected that illusions of sense persist through all the experience of mankind; to the vision of man the firmament is always an azure dome, the heavenly bodies move in it, parallel lines seem to converge; and it is objected that these persistent illusions make the criterion useless. I answer that all that persists in these so-called illu-

4
10

sions is true and real. In vision, for example, the man sees the external objects precisely as the eye presents them. In the seeming convergence of parallel rails his eye reports truly the physical reality of the lessening of the angle of vision with increasing distance. His intellect interprets the sensation. If there is any error it is not in the sensation but in his interpretation of it. And this error does not persist. The belief that the heavenly bodies move around the earth or that the firmament is a solid dome, has not persisted.

IV. The fourth criterion of primitive knowledge is the consistency of itself and its necessary outcome with all knowledge. This criterion is of great practical importance in scientific and all other reflective thought. It has recently been said, "Internal consistency and harmony was the only test of truth known to antique thought; and it supplemented the appeal to actual authority characteristic of mediæval thought."* This is an example of a common style of remark depreciating ancient and especially mediæval thought. Such remarks grossly misrepresent the facts. And the depreciation of this criterion as of little value is contradicted by the continual use of it in modern thought. The verification on which science insists so strenuously as necessary to establish an hypothesis is nothing but ascertaining the consistency of a conclusion of reflective thought with the results of observation. It is true, the mere self-consistency of a conception does not prove that it is a conception of reality. I may form a consistent theory of the government of fairies by Oberon and Titania. It is consistent with all known facts that beyond Neptune there may be a planet belonging to the solar system. These are only creations of imagination or conjectural possibilities, and do not present themselves in consciousness as knowledge. Mere consistency of thought cannot originate knowledge, but it may test it. Man has varied powers or faculties, and knowledge obtained through one faculty or from one sphere of investigation must be consistent with knowledge obtained from every other. This consistency is a criterion of knowledge. What I perceive by the eye I test by the hand. The correctness of an arithmetical division is tested by multiplication. If a necessary inference from a supposed principle is false, it compels us to doubt either the truth of the principle or the correctness of our reasoning from it. Speculative conclusions must be tested by observed facts. If an observed fact contradicts an accepted conclusion of science, the observation must be repeated and corrected or the scientific conclusion must be modified. The whole process of verification is an ascertaining of the consistency or inconsistency of the results attained by one intellectual power or process and from one sphere of inquiry with those at-

* The Value of Life; A Reply to Mallock, p. 73.

tained from others. And so far as from all we obtain successively the same results, our knowledge is tested and confirmed.

The same criterion may be applied in testing what is primitive knowledge. If the intuitions of reason contradict each other they are proved false and at the same time reason itself is proved untrustworthy. If what seems to be primitive knowledge and its necessary outcome is inconsistent with itself or with other knowledge it is not primitive knowledge.

But the criterion is not merely negative. If primitive knowledge is found to be in harmony with experience, if the first principles which regulate thought do not lead us in our reasonings to error and contradiction but to conclusions which all our powers in concurrence acknowledge as truth, if what we in our philosophy hold to be primitive knowledge conditioning experience, is in harmony with our actual experience, then we may properly say that it is continually verified by experience. It is consistent with itself and with all knowledge.

It must be observed respecting the four criteria, that the mind does not consciously appeal to them in the primitive acts of knowing, but only in reflection on its own acts and in answer to the question whether knowledge is real. If then it is seen that the knowledge stands out clear and distinct in its own self-evidence, that it is impossible to think the contrary as real, that the belief persists in spontaneously regulating thought and action in the face of all speculative objections, and that it not only does not contradict any other knowledge, but is accordant with all our thinking and experience, it is accepted as real knowledge. If not, knowledge is impossible.

§ 8. Knowing, Feeling and Willing.

I. Knowing, feeling and willing are distinct but not separate.

They are not separated in human experience. In every feeling there must be knowledge or belief. Every act of will involves feeling which is its motive, and knowledge, which is the light in which the determination is made and without which freedom of determination is impossible. And knowledge remains but nascent and cannot be apprehended in its complete significance until it reveals itself in feeling and discharges itself in voluntary action. The Speculative Reason cannot find the content and significance of its own necessary ideas nor solve its own necessary problems until it becomes the Practical Reason.

Dean Swift compares the man of culture to the bee, which "visits all the flowers of the field and of the garden and by an universal search, much study and distinction of things, brings home honey and wax. . . . thus furnishing mankind with the two noblest things,

sweetness and light.”* Matthew Arnold has popularized Swift’s conception of culture as comprising sweetness and light—the light of knowledge and the sweetness of right feeling, action and character. These are necessary elements of culture because knowing, feeling and willing are indissolubly united in man’s personality; they exist simultaneously in the same mental state, and no one of them can in fact complete itself without the others. The light is for no purpose without the sweetness, and the sweetness runs to waste and disappears without the light.

But while, in human experience, knowing, feeling and willing are never separated, they are distinguished. They are not disparted organs or faculties; but they are different aspects of the same mental states, different poles of the same mental energy, different phases of the same indivisible personality. They are clearly presented in consciousness and recognised in thought as different. The difference of knowing, feeling and willing is apprehended by every mind and is at the basis of all reflection on the mental processes and powers. To deny it is to make all psychology impossible and all language respecting mental acts and processes unintelligible.

II. True philosophy must recognize both the inseparableness and the distinctness of the three. Any theory of knowledge which overlooks either the one or the other is false and necessarily prolific of errors.

1. At present perhaps the more common tendency is to overlook the close factual connection of the speculative intellect with the practical side of human nature, to insist that true knowledge can be acquired only in the complete isolation of the intellectual process from all feeling, volition and choice, and so to exalt the speculative intellect at the expense of the moral, the æsthetic, the religious and the practical in man. This tendency may explain some of the defects and errors of psychology, metaphysics and Christian theology; it is even more obtrusive and more potent for evil in the materialistic speculations which swarm, like poisonous flies, around the head of “star-eyed science.” I will exemplify it in Christian theology. Some theologians have insisted that the Spirit of God can influence the human soul only by presenting truth to the intellect. An eminent divine preaching in Boston many years ago declared: “If I could present truth to the mind as clearly as the Holy Spirit does, I could convert souls as easily as He.” This supposes man to be a creature of intellect alone, whose action is excited and directed invariably in a sort of mechanical way by processes of logic. But in a multitude of cases every man acts from feeling with scarcely the consciousness of belief or thought. If he meets a tiger in a jungle, his fear makes him run without a process

* *Battle of the Books*; Swift’s Works, Vol. i. pp. 203, 205.

of reasoning. So preaching when addressed exclusively to the intellect is dry, while eloquence touches the whole man and in enlightening the intellect fires also the heart. And what is the power of music? Why does a cheerful face diffuse its sunshine, and gloomy looks spread like a chilling mist to all? What is the power of a commanding presence, or of the self-possession and courage of a single person in a time of danger and general consternation? What did General Sheridan impart to his fleeing army in Virginia, when his mere coming into sight changed defeat into victory? The power of mere argument in determining the opinions, conduct and character of individuals, the courses of history and the development of civilization has been greatly overrated. The element of feeling commonly enters into the formation of opinions. Men adopt opinions, not because they have logically proved them, but because they suit their feelings, are in harmony with their characters and their views of human life and accordant with their chosen ends. Nor must opinion be erroneous because founded on the feelings. If the feelings on which it is founded are right, the opinion will be likely to be right. If a pure woman passes on the sidewalk the entrance to a by-way to hell, whence come up the reek of the stews, the babble of drunkards, and the words of obscenity and profaneness, her pure feelings drive her away before she has time to think. A pure spirit in heaven may follow his feelings as safely as his judgment. There are as many erroneous opinions founded on false logic as on wrong feelings. Men do not commonly believe in God because they have proved his existence, but because their whole spiritual being cries out for him, is smothered without him, and refreshed, inspired and ennobled by his presence. The soul responds to the touch of the divine as the string of the viol to the touch of the musician. An atheist, who had been pressed with many an argument without conviction, was one day felling a tree. As the tree came crashing down, these words, from the memory of childhood, flashed on his mind: "As the tree falleth so it shall lie; and as death leaves us so judgment must find us." It awakened his consciousness of responsibility and of sin; and he found no peace till he found it in faith in God. A most reasonable conversion, though unreasoning. For whatever may awaken the spiritual in the constitution of man awakens it to the consciousness of God. Hence the unexpected and seemingly inexplicable breaking down of religious unbelief in the great crises of life. When the shadow of death is glooming on the soul and the body is sinking to its last sleep, the spirit awakens and finds itself, as it always must when it awakens, face to face with God.

The intellect, therefore, is not the only inlet by which the truth can enter and influence a man. His soul is like a great cathedral admit-

ting light through many windows, each stained its own color and having its own pictures; yet not falsifying the light, but showing in the varying colors its real elements and its diversified richness and beauty.

Therefore the only true philosophy is that which germinates from the entire constitution of man and grows with the normal growth of his entire life. This is the only philosophy which can safely be the guide of life. A French writer has said regretfully, "There is in each of us a poet that died young." It is the characteristic of genius that this inborn poet lives the whole life long with all the dewy freshness of youth. It is the characteristic of Christianity that passing through the intellect it quickens and keeps fresh all the purest and most beautiful sentiments of humanity, all that is noblest and most divine in the spiritual life, so that always in the freshness of spiritual youth, "as little children" we enter into the kingdom of God.

2. Errors also arise from identifying knowing, feeling and willing, or obscuring the difference between them. These errors do not arise so much from definite denials of the difference, as from admissions or attempted explanations or lines of thought and argument which imply that there is no difference. Such, for example, is the assertion that choice is a judgment of the intellect; and such is the use of the popular saying, that feeling is a kind of knowing, as if it were a philosophical definition.

In respect to errors of this class two points must be noticed. The first point is that in cases of which we say the feeling is the knowing, there is a belief or knowledge present with the feeling. If fear moves a man to run away from a tiger, the fear involves a belief or knowledge that the tiger is a dangerous beast. If a pure woman is driven by her feelings away from impurity, she knows what impurity is and knows that she has come near it. And the knowledge in these cases is just as different from the feeling as if it were separated from it by some hours. In all these cases the knowledge, in the order of dependence and thought, is presupposed in the feeling. How can one fear if he has no knowledge of danger? It is only in instinct that the feeling and action precede the knowledge. And evolutionists suppose that in instinct the knowledge originally preceded the feeling and action, but by heredity through many generations the knowledge or belief has become merged and lost in the feeling.

The other point to be noticed is that feeling and willing cannot in themselves be ultimate criteria of knowledge. If one person lives for sensual gratification and another for the service of God and man in obedience to the law of love, their respective feelings will lead them to different lines of conduct, to different views of life and to different opinions. Feeling may guide to right action, and opinions founded on

feeling and character may be right. But this can be so only when the feelings and the character are right. Any testing of opinions by their conformity with our own feelings and character necessarily presupposes knowledge of what feeling is right and what is wrong. And, further, the very act of testing an opinion in this way is an act of thought, and not a feeling; the comparing of character and feelings and judging which is right is an intellectual act; and the standard of judgment between right and wrong is the truth and law of reason, and is not in the feelings.

III. Feeling and willing may be used, with the qualifications just mentioned, in testing the reality of knowledge in general, and in verifying particular beliefs.

1. Our feelings, choices and volitions, the whole practical side of our constitution protest against agnosticism as really and effectively as do our reason and our knowledge. Mr. Spencer's doctrine that the absolute being, the ultimate ground and deepest reality of the universe, is unknowable, is contradictory to reason and knowledge. If the true and ultimate reality is unknowable all reality is unknowable; what we take for reality is merely phenomenon, and what we take for knowledge is merely illusion. Mr. Spencer himself contradicts his own agnosticism by declaring his knowledge of the unknowable; for he declares that the Unknowable ground and reality of phenomena is absolute being, exists, is power, is everywhere present, and is manifested in all the ongoing of the universe. To the agnostic, belief in the existence of an unknowable absolute as the ultimate ground and reality is self-contradictory; even a genius like Herbert Spencer cannot enunciate the doctrine without contradicting himself. And if the Absolute Reality is unknowable all reality is unknowable and knowledge is impossible.

This agnosticism is equally contradictory to the rational constitution of man on its practical side. To say that the ultimate reality of things is unknowable, and yet to insist that it ought to be the object of reverence and even of religious homage and that we ought willingly to order our actions in coöperation with the manifestation of the unknowable as it reveals itself in the evolution of the universe, is certainly absurd. We are told that religion is legitimate in the sphere of feeling and that imagination may picture the unknowable, in whatever form it will, as an object of worship. But can a sane man revere and love and serve what is unknown and unknowable? Especially can he worship what he knows is a fiction of his own imagination and revere it as the Absolute Being? So also Hamilton and Mansel declare that the Absolute is unknowable, that what is knowledge and truth and right and love to us may not be knowledge, truth, right and love to God; and yet that

we ought to love, adore and serve him. The doctrine contradicts both the pure or speculative Reason and the practical. It is alike absurd and immoral. If that, which is most real in the universe and is the ground of all that is, may be unreason and not reason, may be the contrary of all which we know as true, right, perfect and good, may be the antagonist of all which human reason approves as the objects of our highest aspirations, our best affections and our noblest endeavors, then our whole moral and practical nature not less than our rational is an abortion and a lie. Man has no scope for his aspirations, affections and powers. "Vanity of vanities, all is vanity" becomes the only true account of human existence. No philosophy or science which involves this can ever gain wide or permanent control of the mind of man.

2. The practical side of our being also implies objective reality. Fear, joy, pity, anger imply an object of fear, joy, pity and anger. If these feelings are purely subjective the feelings themselves cannot exist. In an important sense we perceive objective reality through all the feelings as really as through sensation. Our feelings are a sort of reaction on the outward object. A philosophy which denies that the feelings imply objective reality, would deny that our feelings have any relevancy to the world in which we live and thus would annihilate all motives. Such a philosophy cannot be believed.

It is equally true that choice and volition imply objective reality. All enterprise and energy assume the reality of the universe as the sphere of action, and of the objects sought by enterprise and energy. The man striving with all his might to remove an obstacle, to overcome an enemy, to gain house and land cannot doubt the reality of the objects. A philosophy which denies the objective reality of things is as fatal to all energy as it is to all knowledge. Man cannot believe it. Man is a part of the universe. It acts on him and he reacts on it, not in his intellect alone, but also in his feelings and his will. And this reaction, whether in knowledge, feeling, choice or exertion, is always attesting the reality of its object.

3. And since we are so constituted that we judge some feelings, aims and actions to be worthy and noble and others unworthy and ignoble, a true philosophy must teach that the universe gives scope to our intensest action for the realization of our highest aspirations and our noblest ends. A philosophy which denies this is Pessimism; it denies that life is worth living; it declares that the universe gives no scope for feeling, or action or achievement of any worth. The Reason, the Feelings, the Will revolt from it. The truth of opinions is tested by their bearing on action and character, their teachings as to what are the highest ends of human life, and their power to quicken and guide to the realization of those ends.

And the practical side of humanity also attests the reality of man's spiritual being and of the objects of his highest aspirations and endeavor. For men live but a little time. If the universe is to give realization to their highest hopes, satisfaction to what is best in their affections, scope for their noblest endeavors, their lives must be more than "little breezes" which

"dusk and shiver
Through the wave that runs forever ;"

they must be immortal. And this practical attestation of the reality of the spiritual is precisely the same in kind with the practical attestation of the physical, which in fact compels the belief in its objective reality. Man perceives the reality both of the spiritual and the physical through his feelings, choices, volitions and exertions as really as he perceives outward reality through the senses. There is a true and profound philosophy in one of the "preliminary principles" of the Presbyterian "Form of Government;" "Truth is in order to goodness; and the great touchstone of truth is its tendency to promote holiness, according to our Saviour's rule, 'by their fruits shall ye know them.' There is an inseparable connection between faith and practice, truth and duty."* Some scientists teach that, as the inevitable result of evolution, the whole universe will come to a stop and all life and motion forever cease. Our whole being revolts against, resents and resists the conclusion. In accordance with the foregoing principles the impossibility of this belief and the revolt and resentment of the heart against it are founded in a true philosophy. It is safe to predict that any theory which necessarily involves this conclusion will never gain currency among men. In like manner, when we are told that the universe gives no scope for the realization of our spiritual aspirations and that the objects of them have no reality, that our endeavors to attain the noblest ends of our being must be abortive, and that the progress of science is destined to chill and still all such aspirations and endeavors forever, our whole being revolts against, resents and resists the conclusion. And this revolt and resistance also are justified by true philosophy; and we may safely predict that a theory involving such a conclusion will never control the action and history of mankind.

4. The greater part of human actions are acts of faith. In every enterprize a man risks something of the present to win something in the future. He does it in faith that events will be according to his calculations. If he succeeds he knows that his calculations were according to the realities of the universe; that is, according to truth; for truth is reality intellectually apprehended. If he fails, he knows that he was

* Constitution of the Presbyterian Church in the U. S. A. p. 344.

in error. In either case by his voluntary action he acquires knowledge of reality. And in this way a great part of human knowledge is acquired.

But a man may aim at unworthy ends. The universe makes both good and evil possible to him. If now he can ascertain any principles determining what are the highest possibilities of his being, those principles must be true; because those highest possibilities are what the universe itself makes possible to him in his reaction on it.

Man is so constituted that principles of action present themselves in his consciousness as regulative of his thinking, and feeling and willing. He distinguishes the reasonable from the absurd, the true from the false, the right from the wrong, the perfect from the imperfect, the worthy from the unworthy. In the true, the right, the perfect and the worthy he recognizes the highest possibility and supreme good of his being. In reference to these there are problems which thrust themselves for solution on every generation, questions which every age must answer. Are the highest possibilities and noblest ends of human life attained by acting in supreme selfishness or in universal love? by lives of self-indulgence and ease and being ministered unto or by lives of energy and service? by lives conformed to the negations of materialism or to the large and positive principles, promises and hopes of Christianity? These are legitimate criteria of knowledge. The materialist appeals to these and similar criteria as constantly and as earnestly as the theist. By these criteria the experience of the race is establishing the supremacy of the law of love and the reality of man's spiritual interests and relations. Christianity has already advanced far in proving itself true by its effects. When in the lapse of time its principles are all realized and its promises fulfilled in the civilization of mankind, the demonstration will be complete.

IV. The errors and superficiality of skeptical and materialistic scientists rest largely on their disregarding the real relations of knowing, feeling and willing and attempting to construct a science of the universe as if it were an object of thought alone.

1. It is this which leads them to reject, in theory, all argument from final causes. I say in theory; because in fact they habitually use it in their scientific investigations.

Man's knowledge in all departments is closely connected with the satisfaction of his feelings and the accomplishment of his purposes. He accepts the statements of fact and method accordance with which enables him to accomplish his designs. He accepts as true the principles which enable him to realize what both the reason and experience of man pronounce right, and perfect and of true worth. The practical Reason is as real a factor in his knowledge as the Speculative. The

recognition of final causes is in the essence of his knowledge, as really as the recognition of efficient causes. Nor does the knowledge of the efficient, preclude the reality of the final cause. Some unmusical person once described the playing of a great violinist as scraping catgut with horse-hair. It is a correct description. But it would be foolish to insist that this physical force and its instruments are all that science can recognize in the performance, and that it knows nothing of it as the intentional production of enchanting music. As Bulwer says: "Science is not a club-room; it is an ocean; it is as open to the cock-boat as to the frigate. One man carries across it a freighting of ingots and another may fish there for herrings. Who can exhaust the sea? Why say to the intellect, 'The deeps of philosophy are pre-occupied?'"

2. The principles which have been presented expose the error that the scientific spirit is the pure love of the truth, defecated from all admixture of feeling, preference or choice. Of the love of the truth in this sense Mr. Lecky says that it "is perhaps the highest attribute of humanity;" that they who possess it "will invariably come to value such a disposition more than any particular doctrines to which it may lead them; they will deny the necessity of correct opinions;" that is, love of the truth will entirely cease, being displaced by love for a certain disposition or feeling; love of the *truth* will be displaced by love for the *love of the truth*. Mr. Lecky goes so far as to insist that children ought not to be religiously trained lest it should prejudice them. This would equally imply that the child ought not to be trained to virtue, since this training also implies doctrine. The necessary inference would be that a child must not be taught to love God and his neighbor lest he should be biased and prejudiced. Professor Huxley characterizes a religious belief founded on the spiritual aspirations and needs of the soul as immoral. Prof. Clifford, in his essay on the "Ethics of belief," says that to believe even the truth without scientific investigation and evidence is morally wrong and incurs guilt; and that if a busy man has not time to investigate he must not believe. But a large part of human actions are ventures on beliefs which have not scientific evidence, in the sense in which Prof. Clifford uses the phrase, and which nevertheless are beliefs so decisive that men venture on them property, reputation and even life. Would the professor call all these acts sin and say that the actors incur guilt; that is, that they deserve punishment?

In this conception of the love of the truth the mistake of our modern *illuminati* is that they conceive of man as divided against himself; they isolate the intellect from all the other constituents of humanity. They do not join with crass practical materialism in saying that man liveth by bread alone. Their maxim is, rather, that man liveth by intellect

alone. The feelings and the will, all that belongs to moral character and practical activity and interests are conceived as in antagonism to the right action of the intellect; and this antagonism is conceived as man's normal state. Hence the only security for the intellect in its search after and knowledge of the truth is its complete isolation and protection from its natural enemies, the feelings and the will, the moral character and the interest in the practical activities of life. In order to the successful use of the intellect our modern *illuminism* requires the student to unman himself; to divest himself of all feeling and character, of all choice or preference, even of the preference for right rather than wrong, or for enjoyment rather than misery, of all, in fact, which moves him to action and makes him capable of achievement, which makes him of any use or his life of any worth to himself or others. Plainly this can only lead to agnosticism and not to the knowledge of the truth; for it assumes that falsity is organized into the very constitution of man.

The real condition of discovering the truth is just the contrary. It is not the isolation of the intellect from the feelings, choices and volitions, but it is the harmony of intellect, feeling and will in the complete development of the man in the unity of his being to the realization of the rational and normal standards of truth and right, of perfection and worth. Right feeling and character must be in harmony with the knowledge of the truth and helpful to its attainment. It is not feeling, choice, purpose, determination which bias men against the knowledge of the truth; it is only wrong feeling, choice, purpose and determination.

In the very definition of the love of the truth, as conceived by our *illuminati*, are obvious inconsistencies. They push the analysis of mental processes so far that they seem to regard them not only as separate faculties or organs, but as separate entities in conflict with each other. In insisting that the love of the truth must be defecated from feeling, choice and purpose, they contemplate truth as an entity existing isolated from all relation to human interests. But this is to say that the universe itself has no relation to human interests; for truth is the reality of the universe intellectually apprehended. As such it has powerful and constant influence on human interests. The very conception of seeking truth isolated from human interests is itself falsehood. The supposed isolated truth, if discovered, would not be the truth, would not be the reality of the universe apprehended in the mind; it would be unreality and falsehood. At best it could be only a partial and one-sided apprehension of reality. The definition involves another inconsistency. The love of the truth itself involves feeling; seeking to know truth under its influence, is seeking under the influence of a feeling. It

may mislead to disregard moral duty and culture and all the truth involved therein; which would be as real a bias misleading away from truth, as the moral feelings themselves can be.

This conception of the love of the truth reveals its insufficiency and erroneousness also in its practical development. There is a common impression that men devoted to study are weak in practical affairs. So far as this is the necessary result of confinement to a particular line of work it is no disparagement to the scholar; as it is no disparagement to a lawyer that he does not understand medicine. But if study is prosecuted with only a speculative interest there is a weakness of the man and not merely a necessary professional limitation; for his development is abnormal, his culture sickly, and his knowledge awry.

One result is that his interest is concentrated on the inquiry, not on the truth; he studies for the enjoyment of his own intellectual activity. This is the purport of Lessing's famous saying: "If God held in his right hand all truth, and in his left hand the single always urgent impulse to search after truth with the condition that I be always and forever in error, and should say to me, Choose, I should humbly turn to his left hand and say, Father, give me this; the pure truth is for thee alone."* This saying has been repeated by many in different forms as expressing the true scholarly spirit; and Hamilton approves it as expressing the true end and value of philosophical investigation. But it certainly does not express the love of truth. On the contrary it declares that love of truth is entirely displaced by the enjoyment of intellectual activity. And what a picture is this of the life of a student—a life of amusement only. For what is the difference between spending life in hunting the truth or in hunting foxes, if the truth is no more valued than the fox, and in each case the sole end is the enjoyment of the exercise? Hence comes dilettanteism, a mere amusing one's self with literature, art or science in entire indifference to truth and to its applications to the regulation of life. Hence hypercriticism and fastidiousness, a languid and luxurious disposition to get the most enjoyment possible out of life, and yet a fastidiousness which can find nothing to enjoy. Hence the tendency, which appeared in the decline of the Roman empire, to long and arid controversies on barren questions. Epictetus ridicules a question much discussed in his day. It was this: "If a man says of himself, 'I lie,' does he lie, or does he tell the truth? If he lies he tells the truth; but if he tells the truth he lies." Chrysippus wrote a treatise on this question, entitled the "Pseudomenos" in six books, said to have been famous in its day.† Another tendency is to Skepticism as the ultimate issue of all intel-

* Werke: Vol. x. pp. 49, 50. Ed. Berlin, 1839. Eine Duplik.

† Epictetus; Discourses, B. ii. chap. 17.

lectual endeavor; a perpetual inquiring, "ever learning and never able to come to the knowledge of the truth." The whole significance of life comes to be expressed in an interrogation point. Sterling and James Blanco White were examples; seeking a faith and never finding it; passing from one faith to another in perpetual unrest, like a man lost in a Dismal Swamp, leaping from one quaking turf to another till he sinks in the suffocating quagmire—a life of intense activity but of no achievement—the whole energy spent in seeking a place to stand. Another result is indifference to truth both in itself and in its bearing on human welfare. Underlying this false conception of the love of the truth is the assumption that truth cannot be known; that all opinions must be held as doubtful; that the scientific spirit requires that we must be indifferent to what we hold as truth and always ready to receive its contrary. This precludes the conception of any principle believed, to which the will consents in allegiance, by which the man regulates his life, and for which he would willingly die. Paul must meet the Athenians on Mars' Hill as ready to believe in Jupiter as in Christ. One writer has taught that the existence of a revelation from God of principles true for all time would be incompatible with human progress. Another has expressed doubts whether ever a martyr for truth acted wisely. All such representations imply that truth cannot be known; that the deepest principles on which human knowledge depends may in the future be found false; that everything is uncertain. Thus this theory of the love of the truth is in its essence agnosticism.

While this theory reveals its insufficiency and erroneousness in its practical development, it is disproved also by the fact that all great epochs of human progress have been characterized and carried forward by the presentation of truth in its practical bearing on life, and with glowing feeling and steadfast purpose on the part of those who have been agents in the progress. Their love to the truth has not been defecated from all feeling nor sublimated into indifference. They have loved the truth in the sense that with all the powers of their being they lived for it and if necessary were ready to die for it. Freedom of inquiry is a condition of progress; but it is only a condition, never the power by which the progress is effected. Noble characters are formed and great deeds done, not by inquiring after truth, but by believing it and acting on it.

The great change wrought by Lord Bacon in physical science itself was not effected by his teaching men to reason by induction. Men have always reasoned by induction as well as by deduction. But Lord Bacon wrought the great reformation in science by calling men off from merely speculative inquiries, such as occupied the mediæval scholastics, to investigations bearing directly on the welfare of man.

3. A right moral character and a devout and reverential spirit, instead of being hindrances to the investigation of truth, are essential to the condition of mind most favorable to such investigation. They are component elements of a true scientific spirit. This is so because they are essential to the wholeness and harmony of man's development. These are helpful in the study of physical science. They are indispensable in the investigation of moral and religious truth. The greater the purity, delicacy and earnestness of the moral and religious life, the greater the fitness to appreciate moral and religious truth. A cleanly person is a better judge of what cleanliness is than a savage in the filth of his wigwam or an old monk who has always religiously abstained from washing. A pure woman is a better judge of moral purity than a rotten debauchee. A mean man is a poor judge of what is honorable and a swindler of what is honest. It is the same in religion. Paul and John are better judges of religious truth and its evidence than Simon Magus or Pontius Pilate. This is the philosophy of the New Testament: "The pure in heart see God;" "Except a man be born again he cannot see the kingdom of God." Pride, selfishness, sensuality, the heart of sin blind the mind to religious truth. To such a man religious truth is foolishness, and the whole Christian life unintelligible. But as Schelling truly says: "To remain unintelligible to such an one is glory and honor before God and man. *Barbarus huic ego sim nec tali intelligar ulli.*"*

4. The doctrine which I have been presenting is accordant with the familiar fact that knowledge and culture are advanced indirectly by the growth and development of the man, quite as much as by direct study, argument and examination of evidence. Obscurities which by dint of thought we once could not make clear, difficulties and objections which we could not argue down, we find, in later years, to be obscurities, difficulties and objections no longer. It has come to pass as the result of growth. If all knowledge must come by direct intellectual effort, isolated from feeling and willing, this result would be impossible. But because knowing, feeling and willing are inseparable in the unity of the person, the growth and development of the person insure an advance in knowledge and intellectual insight.

* *Idealismus der Wissenschaftslehre; Sämmtliche Werke, I. 433.*

CHAPTER III.

THE ACTS AND PROCESSES OF KNOWING.

§ 9. Classification.

THE powers of the mind are commonly considered in three general classes:—*Intellect*, the mind considered as intelligent or capable of knowing; *Sensibility* or *Feeling*, the mind considered as susceptible of motives and emotions; *Will*, the mind considered as self-determining.

The acts and processes of knowing may be considered in three classes:—*Intuition*, *Representation*, and *Reflection* or *Thought*. All knowledge arises in Intuition, or in Representation, or in a process of Thought.

I. I speak of powers or faculties merely as a matter of convenience, to denote the mind itself considered as capable of various acts or states. This is well put by Lotze, who says, in substance, that for the whole of every circle of similar phenomena we ascribe to the soul a peculiar faculty or capacity to act in a way which proves it competent to the action in each circle of phenomena. As many as are the distinct groups of acts which come under our observation, so many distinct faculties for the soul must we assume—but not a distinct number of qualities laid out adjacent to one another and imprinted on its nature, but so in affinity with each other that they all concur, as distinct expressions of one and the same being, in the wholeness of its rational development.*

II. The mind is active in knowing, not passive. The object known does not imprint itself on the mind in a state of passivity as tracks are imprinted in mud. Knowledge is an action of the mind. All knowledge consists in knowing.

III. In all knowledge the element of intelligence is contributed by the mind itself. In perception there must be the object perceived, the subject perceiving, and the perception. The perception is the act of the mind; it is its primitive intelligence; it is the intellectual equivalent of the object known in the act of perceiving. Every inference is an act of the intellect; and the intellect can draw an inference only because, by virtue of the constituent elements of its own rationality, it

* Mikrokosmos; vol. i. pp. 183, 184; Book II. chap. 2.

knows principles regulative of all thought, which make an inference from reasoning possible. Knowledge without any element of intelligence contributed by the mind itself, is inconceivable and unthinkable; the words are without meaning.

It is objected that because in all knowledge the element of intelligence is contributed by the mind itself, therefore all knowledge is subjective and unreal and our intellectual faculties untrustworthy. This objection is mere nonsense. It is the objection that knowledge is impossible because there is a mind that knows; or that knowledge is impossible because it is knowledge. In other words it demands that the definition of knowledge must include the denial of all the conditions which make knowledge possible.

IV. Knowledge cannot be distinguished from knowledge as different in kind, but only as differing in the conditions under which it arises and in the character of its objects. A geometrical demonstration is a process of thought; but the process consists merely in bringing the different elements of the figure successively into juxtaposition before the mind, so that it sees the relations between them. When thus brought before the mind, the knowledge of the relations springs up clear in its own self-evidence. The process is a passing successively from knowledge to knowledge. Reasoning could never establish its conclusion, were it not for this always inexplicable act of knowing, in which, at each successive step, the mind knows the relations of things brought together before it.

§ 10. Intuition or Primitive Knowledge.

I. Intuition or primitive knowledge is knowledge which is immediate and self-evident.

It is *immediate* in the sense that it is not attained through the medium either of a representation, or of any process of thought. It is face-to-face knowledge.

It is *self-evident*; it needs no proof; it cannot be proved, because nothing can be adduced in proof more evident than the intuition itself.

II. Intuition is distinguished as presentative or perceptive, and rational.

1. Presentative or perceptive intuition is immediate and self-evident knowledge of some particular reality in some particular mode of existence present to the consciousness.

This includes sense-perception and self-consciousness. Sense-perception is intuitive knowledge of external objects through the senses; it is man's intuitive knowledge of his environment.

It has been objected that sense-perception is not immediate knowledge, because it is through the senses. It may be replied that the

objection is equally valid against all intuition, since all mental operations involve the action of the brain and nerve. It may be replied, further, that while these physical changes are important facts of physiology and must be taken into account in any complete investigation of mental phenomena, yet man has no consciousness of them whatever, they do not explain the facts of consciousness nor make a bridge for thought from the motions of matter to conscious knowledge, feeling and determination. On the other hand, these states of consciousness are real and well-known facts, distinct from the physiological processes. They are themselves the mental phenomena which we are seeking to understand. They are distinctively psychological facts and must be defined and discriminated as such. Sense-perception is immediate knowledge, in the sense that it does not arise through the medium of any other psychological act or process; it is not attained through the medium of representation or of a process of thought.

Self-consciousness is the intuitive knowledge which the mind has of itself in its own operations. Sense-perception and self-consciousness are sometimes designated as external and internal perception.

2. Rational intuition is the immediate and self-evident knowledge of a universal truth or principle.

It is not asserted that the truth or principle is universally believed, but that it is universally true; not that all men believe it everywhere and always, but that it is true everywhere and always. And as such it asserts itself in the consciousness; it must be so, and under no circumstances or conditions can it be thought contrarywise.

3. Intuition is the original primitive knowledge, which gives the objects about which we think and the principles which regulate all thinking.

Presentative intuition gives the particular realities about which we think. They may be called objects, or material or data of thought.

Rational intuition gives the principles which regulate all thinking and which make reasoning and inference possible. It also gives, in the knowledge of universal truths, material or data for thought transcending the particular realities given in presentative intuition and so opens to our knowledge the supersensible, the personal and the divine.

4. The name intuition has often been restricted to rational intuition. It is more properly applied both to this and to the presentative intuition. Both are alike primitive, immediate and self-evident knowledge, and therefore ought to be designated by the same name. The designation of all primitive knowledge as intuition is also accordant with the etymology of the word and with the usage of philosophical writers of the highest authority. When thus designated the name expresses the common quality of all primitive knowledge and emphasizes the truth

that all objections against rational intuition on the ground that it is immediate and self-evident, unproved and unprovable knowledge, are equally valid against sense-perception and self-consciousness.

III. The mind, considered as capable of rational intuition, I shall call the Reason. Reason as thus used must be distinguished from reasoning, which is a process of reflective thought. So Plotinus speaks of "the transition from reason to reasoning."*

§ 11. Knowledge by Representation.

Knowledge by representation is knowledge of a reality formerly presented in intuition and now re-presented in a mental image or concept. The mental image or concept is called a re-presentation.

When these mental images are not recognized as re-presentations of realities previously presented, they are known merely as mental images, and are the objects or material for the creations of imagination.

The recognition of a mental image or concept as a re-presentation of a reality previously known, is memory. Memory is the power of representing the past and of knowing it again through the re-presentation.

Memory is self-evident knowledge. It stands independent of reasoning in its own self-evidence. In this respect it agrees with presentative intuition. It differs from it in that the knowledge is not immediate, but through a representation. It presupposes a reality formerly known intuitively, and now known again through a re-presentation.

The reality of knowledge through memory is essential to the reality of all knowledge which rests on a process of thought or involves any lapse of time. Without it observation and experiment can ascertain no facts, reasoning can reach no conclusion, experience can accumulate no knowledge; for the knowledge of this moment would vanish irrecoverably in the next.

The attempts to vindicate the trustworthiness of memory otherwise than as giving self-evident knowledge are futile. Mr. Huxley holds that certainty is limited to the present consciousness. Yet he says that "the general trustworthiness of memory" and "the general constancy of the order of nature" "are of the highest practical value, inasmuch as the conclusions logically drawn from them are always verified by experience."† He argues that the present act of memory may be trusted, because in past experience a multitude of remembrances have been found to be correct. But he can have no knowledge of any past remembrance and its verification except the knowledge given by memory

* Μετάβασις ἀπὸ νῶν εἰς λογισμὸν; quoted by John Smith, *Select Discourses*; Cambridge, 1673, p. 94.

† Lay Sermons, p. 359.

See
DESCARTES
CHIMERE

(190)
WIND
et
Huxley

itself. He cannot know in a single instance during his process of verification what he is verifying nor on what premises his logical conclusion rests, except as he remembers. How can an intelligent man gravely propound such a begging of the question as argument, and claim that he is scientific? The trustworthiness of memory cannot be established by experience, since it is itself a condition of the possibility of experience.

James Mill explains our belief of memory as the result of the association of ideas. But this is an impossible explanation. A visit to a house in which I once dwelt may be the occasion of mental images of various scenes arising in my mind; but it does not in the least account for my knowledge that these are representations of scenes in my past life. Or when he says that the ideas of past experience are irresistibly associated with the idea of myself experiencing them, and this irresistibility constitutes belief, in this statement itself he assumes a knowledge of past experience and of myself experiencing it as already existing and as the basis of the entire effect attributed to the association of ideas.

Physiology explains memory by "the organic registration of the results of impressions on our nervous centres." Whatever is present in consciousness is attended by action and waste of nerve, and leaves behind in the nerve itself a trace, which Dr. Maudsley compares to a scar, or a pit left by small-pox.* This implies that every object seen during a lifetime leaves a trace like a scar on the retina of the eye, that these innumerable scars imprinted on this exceedingly small surface and new ones momentarily added, are distinct and without confusion, and that each one remains identified with the object which originally caused it and ready at every moment to represent it in consciousness without commingling it with any other. This explanation is simply inconceivable, and itself needs explaining as much as the fact which it professes to explain. And the difficulty is multiplied by the five senses, by all the nerves of feeling and motion, and by the several parts of the brain if the theory is established that each of them has its special function. At the most, physiology can only describe the physical conditions of intellectual action. It cannot find thought and knowledge in the structure or functions of the nerves, nor explain them by molecular motion, or by the traces of its action which it leaves.

§ 12. Knowledge through Reflection or Thought.

I. Reflection or thought is the reflex action of the intellect attending to the reality known in presentative intuition, and apprehending, differentiating and integrating it under the regulation of the principles

* *Physiology and Pathology of the Mind*, pp. 182, 183.

known in rational intuition, and concluding in a judgment. Discriminating or distinguishing may be used as synonymous with differentiating, and comprehending or unifying as synonymous with integrating.

1. It is a prerequisite to thought that both the reality about which we think and the principles which regulate our thinking be already given in intuition.

2. The objects of thought as presented in intuition are indeterminate. They lie before the mind in their reality, differences and relations. But they lie before the mind as indeterminate or nebulous matter, present to the consciousness but undefined.

Neither consciousness nor reason gives any ground for the theory of Reid, Kant and others that we first perceive the *minima visibilia*, and then proceed to unite them in thought, the mind passing from one to another so rapidly that the transition is not remembered; or that the object perceived is, as Kant calls it, "a synthesis of intuitions," or as J. S. Mill calls it, "a group of sensations." Every intuitive perception, according to Kant, being contained absolutely in one moment,* can be only a perception of an indivisible unit of extension and an indivisible unit of time. But we have no knowledge of an indivisible unit of extension or of time. We know the ego as the indivisible unit in the sphere of personality. We have an hypothesis of the existence of atoms as the ultimate indivisible units of matter; but these atoms are not the units of perception. This theory of successive perceptions of minima has no warrant. On the contrary the material for thought is presented by intuition in an undiscriminated whole. It is sometimes called the nebulous matter of intuition. The primitive knowledge is often associated with the feelings; the feelings themselves carry knowledge undiscriminated and unformulated in them. In the intuition all the elements of the reality are presented to the consciousness in solution; it is only at the touch of reflective thought that the solution crystallizes and all its parts stand out distinctly and in order. In the nebulous, unelaborated matter of intuition the mind by reflection notes the particular realities, their differences and relations, and thus attains clear, definite and complete cognition, which can be declared in a judgment or proposition.

3. Reflection or thought consists of Apprehension, Differentiation and Integration. †

The reflex act of thought is primarily attention, alike in apprehending, discriminating and comprehending. The mind turns back or reflects on the reality presented in intuition, and notes what it is. Real-

*Critique of Pure Reason, Transcendental Analytic, Book II. Chap. II. Sect. III. 2.

† "Thesis, Antithesis, Synthesis." J. G. Fichte.

ity consists of beings, their differences, and the relations by which they are in unity. The mind as it reflects on this reality notes the beings which are presented in it, traces out their differences, and notes their unity in various relations. These are the three acts of thought, apprehension, differentiation and integration or comprehension. The unit of thought is a particular being, simple or complex. The first act of thought is the apprehension of a particular being in the qualities, acts and modes of existence in which it is presented to us in intuition. For according to a necessary law of thought we do not apprehend qualities and acts as appearances merely, but we apprehend the being that appears and acts in them. Hence apprehension is sometimes called identification, because it is the identifying of the qualities and acts with the being that appears and acts in them. I cannot apprehend color, form, solidity, motion or thought except as I know some being existing (*ex-sisto*) or standing out to view in the color, form, solidity, motion or thought. Conversely, I cannot apprehend being except as existing in some quality, action or mode.

Apprehension, therefore, is the reflex act of the mind attending to some particular portion of the reality given in intuition, noting what it is, and thus making it an object or unit of thought. Thus one walking in the evening has the starry sky before his eyes, spread out as an undiscriminated expanse. Presently he fixes his attention on Sirius, notes its size, brightness and bluish tint, and thus apprehends it. In a busy city he hears a confused mingling of sounds, discriminating none; presently he attends to a particular sound and apprehends it as a charcoal-vender's cry. Or he feels at once the chair on which he sits, the table on which he leans, the pen which he holds in his hand, without noticing any. Presently he attends to one of these things, notes something about it which interests him for the moment and so apprehends it. He attends (*at-tendo*), stretches his mind, as it were, about the object and grasps it as an object of thought. His apprehension may go no further than to note its figure in space, or it may extend to a more careful and complete observation of its qualities; but in either case he apprehends or grasps it in his mind. The first act of thought, then, is attending to some portion of reality presented in intuition and apprehending or grasping what it is which the intuition presents to the mind.

Language recognizes this distinction between the mere presentation of a reality in sense-perception or self-consciousness, and the intelligent apprehension of it by the mind; as in the significance of *look* as distinguished from *see*; *listen* as distinguished from *hear*; *touch*, *handle* as distinguished from *feel*; and in the French language the same distinction is extended to the other senses; *flairer* and *sentir*; *savourer* and *gouter*. Apprehension by taste is exemplified in a taster of teas. He

tastes the infusion in one of a row of cups, attends to it and *apprehends* what the flavor is. He then distinguishes or *differentiates* it from teas of different flavors already known to him; he then *integrates* or *comprehends* it in a unity or class of teas of the same flavor and pronounces it Souchong of the second quality. A delicate eater attends to or apprehends the flavor of every morsel and thus gets pleasure; while another, intent on other objects, eats without noticing the flavor of his food.

Differentiation or discrimination is the reflex act in which the mind turning its attention on the reality given in intuition, notes the peculiarities of an object already apprehended and thus distinguishes it from other objects.

Integration or comprehension is the reflex act in which the mind, after having apprehended two or more objects and distinguished them from one another, continues to fix its attention on them, and takes cognizance of them in their real relations and thus integrates or comprehends them in a unity.

A *relation* is any real connection between two or more objects by attending to which the mind comprehends them in a unity of thought. Having differentiated them, by perception of this relation it brings them back (re-lation) into unity of thought. The relation is not created by the mind as a mere subjective thought, but it is objectively real and perceived as such. Thus we discover relations of distance and position in space, of antecedence, sequence and simultaneousness in time, of degree and equality in quantity, of resemblance in quality, of causal efficiency, of knowledge connecting a subject knowing and an object known, and many others.

The process of thought may be compared to the resolving of a nebula with a telescope. In the faintly luminous mist as it appears to the naked eye, the astronomer finds the stars, distinguishes them from one another, comprehends them in the unity of a cluster, and is able to comprehend them in the profounder unity of their astronomical relations. So in the nebulous matter of intuition, thought apprehends the particular realities, distinguishes them from one another, and then comprehends them intelligently in the unity of their real relations. The process of thought may be compared to the development of life in the incubation of an egg; the homogeneous yolk is diversified into lines and parts distinguished from each other, and these parts are then integrated in the living organism of the chick.

Ulrici makes all thought to consist of differentiation.* Hamilton makes it all to consist of comparison. But it is evident that before two objects can be compared or comprehended in a unity, they must have

*System der Logik, S. 66 and ante.

been known as distinct; and before they can be differentiated, each must have been apprehended as an object of thought.

II. All human thought consists of apprehension, differentiation and comprehension or integration.

By these processes men think on all subjects. If thought is the observation of a sensible object, it begins with apprehending what it is. I once heard Prof. Agassiz say that when he found an insect of a species new to him, he was accustomed to spend some hours in close inspection of it, and thus he got it so completely in his mind that he never failed afterwards to recognize it. This was his *apprehension* of it. He could then distinguish it from all other species by the properties peculiar to it, and could by resemblance assign it to its proper genus and species. The same are the processes in the farthest range and most complicated action of thought. In all thinking the mind follows this beaten track. In the most complicated processes of thought the mind can do no more than to apprehend, discriminate, and comprehend. It has but three questions to ask: What is it? What is it not? How is it related to other things in the unity of a harmonious whole? Thus the ancient Greek philosophy classified the objects of human inquiry: τὸ ὄν, τὸ ἕτερον, τὸ ἐν—being, its difference, its unity.

When two or more objects have been apprehended and discriminated, the mind proceeds to cognize them in a larger unity or whole and in real relations not discovered at the first glance. This whole becomes a new unit of thought to be differentiated and integrated again. And this process the mind continues till it comprehends all material things in the unity of a Cosmos, and it and all spiritual reality in the unity of a rational system under the government of God.

All error in thinking must be in one or the other of these three processes; and thought should be carefully guarded in each. Error arises when the thinker does not clearly, correctly and adequately apprehend the object under consideration; or when he confounds it with that which differs; or when he integrates the discriminated realities in false and unreal relations, or in a partial and one-sided unity excluding realities and relations essential to the comprehensiveness and completeness of the thought.

III. Thought does not present to the mind the beings which are its objects, nor their differences and relations; it merely apprehends some reality which intuition presents, and under the regulation of the laws of thought traces out the differences actually existing between the apprehended objects and discovers the real relations by which they exist in unity. Thence it may proceed, beyond what is presented in intuition, to infer, according to the principles of reason, the existence of reality not actually observed and to determine its differences and rela-

tions. This process we call reasoning; but it is only apprehending, differentiating and integrating under the regulative principles known by rational intuition.

The necessity of thought has been illustrated by comparing the undiscriminated content of intuition to light falling on the eye without shade or color, which would make sight as useless as it would be in total darkness; or by the supposition that every object was of the same shade of blue, which would destroy all knowledge of color.* But these analogies are misleading; for they seem to imply that thought creates the qualities, differences and relations of reality; whereas it only takes cognizance of them. If in the reality presented in intuition, there were no qualities, peculiarities and relations identifying and distinguishing the reality, thought would be forever unable to apprehend, distinguish and comprehend it.

IV. Thought, as thus far considered, has for its object beings, their differences and relations, and those complex unities and larger systems of beings which thought discovers. These may be either present in intuition or remembered. For we have seen that every process of knowledge which has duration involves memory.

There are also certain subsidiary objects of thought, necessary to the best prosecution of our thinking about these realities, yet deriving all their significance from the fact that they stand for them.

One class of these subsidiary objects of thought is the mind's own representations, not with memory of the objects represented, but present in consciousness simply as representations. These the mind apprehends, differentiates and integrates, forming ideal creations.

We can also attend to a being as it appears in a single property or act and distinguish it from or compare it with the being appearing in another property or act. This process is called abstraction. By abstracting single properties and acts and making them objects of attention, we are able to apprehend, differentiate and integrate them. It must be noticed however that the object of thought here is still a being, though attended to as appearing in a single property or act.

We also form logical concepts or general notions. The necessity for these is in the limitation of the human mind. If it were necessary in thinking to know every object in all its peculiarities as an individual, and to designate it by a particular name, the multiplicity of objects would overwhelm the mind and confound alike the power of expressing thought and the power of thinking. The mind, therefore, resorts to the expedient of grouping together in a concept or general notion individuals which have certain common qualities, disregarding qualities in

* *Ulrici System der Logik*, S. 65. Hobbes says, "Sentire semper idem et non sentire, ad idem recidunt." "To perceive always the same is all one with not perceiving anything." *Physica*, iv. 25; *opera*, I. 321, Molesworth Ed.

which the individuals differ and designating the concept by a symbol oral or written. We as it were bind these individuals in bundles, labeling each bundle; then we can handle them and pass them from hand to hand. Man's power of using general notions and of designating them by language whereby he is able to lift himself above the multiplicity of objects which confuses him, master it with knowledge, and communicate, perpetuate and accumulate his knowledge, demonstrates his pre-eminent greatness. Yet in another view the necessity of resorting to this expedient reveals his limitations. God alone knows all objects severally in their individuality and "calletth them all by name."

§ 13. Thought Distinguished by its Objects.

Thought may be distinguished by its objects into three kinds: Abstract or Formal; Concrete or Realistic; and Creative. In each case thought consists of apprehension, differentiation and integration; the distinction is only in the object on which the thought is employed.

I. Formal or abstract thought has for its object a logical concept or general notion designated by a general name, and consists principally in the analysis and distribution of the content of the general notion by means of the syllogism.

II. Thought is concrete or realistic when its object is a particular reality presented in consciousness or remembered. In concrete thought general notions and words are used, but the object to which the thought is directed is a concrete reality presented at the time or remembered. For example, when a chemist is investigating the properties of oxygen, he has some particular portion of oxygen before him and the judgment in which he affirms the result of his observation and experiment affirms some particular action of that particular portion of oxygen. When a botanist examines a plant or a zoologist an animal, his thought is upon the particular specimen before him. After examining many specimens and finding the same property common to them all, he is able by induction to predicate that property of all individuals of the kind. But in every case the object of his investigation is not a general notion designated by a word, but is the concrete reality itself.

Some of the processes of concrete thought are Observation and Experiment, Classification, Co-ordination in invariable sequences or laws of nature, Colligation of facts, Induction, Deduction, Verification, Interpretation and Vindication of facts to the Reason and Systemization. Deduction, as it appears in concrete thought, consists of inferring effects from a known cause, particulars from a known universal principle or law and mathematical truths from the forms of space and number.

III. Thought is called Creative when its object is a mental representation.

Creative thought is the reflex action of the mind on its own representations, apprehending them, distinguishing them from each other and comprehending them in a complex whole. The primitive process is the same as in formal and realistic thought; but as the objects of thought are the mind's own representations, the results can be only mental representations; just as in formal thinking, since the objects of thought are notions and words, the result of the thinking can be only notions and words. The power of creative thought is the Imagination.

1. In its lower forms creative thought is fantastic; that is, it is not regulated by rational truths and laws. In this lower action it may be called fancy or phantasy rather than imagination. A centaur, or a tree with leaves of silver, blossoms of precious stones and fruit of gold are fantastic creations. The creations of fancy are sometimes pleasing. I recall, as an example, a pretty French picture of autumn, in which cherubs are putting out the flowers with extinguishers. Another example is Rückert's "*Der Himmel ein Brief*," in which he compares the sky to a letter of which the sun is the seal; when night takes off the seal, we read in a thousand starry letters that God is love.

2. In its higher form, the imagination creates ideals accordant with rational truth and law, in which it embodies its highest conceptions of the perfect. The creations of imagination differ from fantastic combinations in that they express the deepest truth and reality; they differ from imitation in that they begin with ideals and proceed to express them outwardly, while imitation begins with the outward object and tries empirically to copy it. Imagination seizes its object by the heart and works from within outwards.

3. While the imagination cannot of itself carry knowledge beyond its own representations it takes the lead in every sphere of intellectual activity.

Imagination creates the ideals which the artist expresses on the canvas and in the marble, in words and music, in buildings and parks.

It creates the ideals of mechanical inventions. When Hargreaves upset his wife's spinning-wheel, he saw in the revolving vertical spindle the ideal of the spinning-jenny. Watt saw the steam-engine in the uplifting of the lid of a tea-kettle. Galileo saw the principle of the pendulum in a swinging chandelier.

It takes the lead in scientific discovery. When it flashed on Newton, as by an inspiration, that the law according to which apples fall from a tree is the law of the solar system, he created in his thought a solar system regulated by that law. Kepler created in thought the orbit of Mars; in fact tried nineteen hypotheses before he hit the geometrical figure in which all the known facts as to the positions of the planet could be colligated. Harvey, seeing the valves in the veins, saw the circulation of the blood, creating in imagination the circulatory system of the body

The creative faculty is equally essential in criticism. The critic must penetrate through the work of art to the ideal which it expresses. He stands before the finished work, as an explorer and discoverer stands before the complicated realities of nature. He must create in his own imagination the ideal of the work and the plan of the artist in expressing it, and thus find its intended unity and significance before he can criticize its execution. It takes a genius to understand a genius. It takes a Goethe to reveal a Shakespeare, an Addison to reveal a Milton.

The creative power is equally essential in teaching and in all communication of thought. The ideal, the whole created in imagination according to its real principles, must be presented and grasped before the learner can analyze it into its elements or construct its scattered elements into the real whole.

Even in practical affairs the imagination is equally pre-eminent, whether in a statesman constructing the plan of a wise administration of government, or in a general planning a campaign, or in a merchant or manufacturer planning his business.

In every sphere of human thought it is the leading power of the intellect, the queen of all the faculties of intelligence. In its higher inventions and discoveries it is "the vision and faculty divine" of genius. Where a common mind sees a kettle lid lifted, a spinning-wheel thrown over, a chandelier swinging, a genius sees the application of a power which changes the history of the world. Where a common mind sees only a mass of intricate and confused facts, the genius sees the principle and law by which they are constructed into the unity of a system. The facts lie heaped in tables of figures and collections of books. It is only to the Orphic music of a master-thought that they move and arrange themselves in the harmony and beauty of a scientific system. This is the effect of the imagination, the creative power of the mind:

"Which in truth
Is but another name for absolute power,
And clearest insight, amplitude of mind,
And reason in her most exalted mood."

IV. Scientific investigation is principally by concrete thought, though necessarily supplemented by the abstract and the creative. The imagination creates hypotheses and suggests lines of investigation; but it cannot of itself go beyond its own representations. Formal or abstract thought is indispensable because we must use words and general notions; but it is inadequate.

1. Formal or abstract thought is inadequate on account of the thinker's tendency to stop in the general notions and words. As its

objects are notions designated by words, the thought itself often fails to go beyond them. But scientific thinking must needs penetrate within the general notions and names to the realities signified. Boole says: "By some it is maintained that words represent the *conceptions* of the mind alone; by others that they represent *things*. . . . In the processes of reasoning signs stand in the place and fulfil the office of the conceptions and operations of the mind; but as those conceptions and operations represent things and the connections and relations of things, so signs represent things with their connections and relations; and lastly, as signs stand in the place of conceptions and operations of the mind, they are subject to the laws of those conceptions and operations."* But though the word is the sign of the concept yet it is only a sign or symbol of it; and though the concept is a concept of things yet it can be designated only by a symbol and can be imaged as reality only in some one of the particular things included in it. Hence the danger that the thought stop in the words, and the necessity to complete intelligence that the thought pass through the words to the things.

"Battles are bloody": the mind assents without emotion. The sight of a battle, a visit to a battle-field directly after the fight, a narrative of the experience of a single wounded soldier, fills up the words with a terrific meaning. "London is in England": but it takes the experience of a lifetime in that city to learn what it is in England which is denoted by the word London. Through thus stopping in the words and not going through the words to the things comes so often the unreality of knowledge gained out of a book through words. Thought about things is necessary to give freshness and significance to thought about words and concepts. As Carlyle says, to *think* it is to *thing* it. Ludwig Noiré says: "The only correct method of investigation is to verify things by things"; and he exemplifies the difficulty of reaching reality through words by relating that a number of eminent philologists had a feast prepared according to some ancient Greek recipes, with the result that it thoroughly disordered the stomachs of all who partook of it and caused the death of one of them. An extreme example of sticking in the letter he gives in the story that when the Florentines began eagerly to look through Galileo's telescope, the priests rebuked them from the Scriptures with the words, "*Viri Galilaei, quid statis spectantes in coelum*"? And he quotes a warning against this danger of empty thinking from Thomas Aquinas: "Names do not follow the mode of being which is in things, but the mode of being which is according to our cognition."† Spinoza gives a similar cau-

* Boole's Laws of Thought, p. 26.

† Ludwig Noiré; Die Welt als Entwicklung des Geistes, §§ 10, 11, 12, 13.

tion: "Whence it is easy to see how carefully we should avoid, in the investigation of things, the confounding of the entities of reality with the entities of thought. It is one thing to inquire into the nature of things, another to inquire into the modes in which they are perceived by us. If these two are confounded we shall neither be able to understand the modes of our receiving nor the nature of the things itself."* Examples of confounding psychological processes with logical, and of substituting logical concepts and forms for reality are frequent in the writings of Hamilton, Kant, and notwithstanding the warning just quoted, of Spinoza himself; and the exposure of this confusion is often a sufficient exposure and refutation of their fallacies. The pantheism of Kant's successors in Germany was little else than a resolving of the world-process into a process of logic. Beings, their qualities, differences and relations are not known from the logical concepts of thought; the logical concepts are formed from the knowledge of beings.

2. Formal or abstract thought, being limited to the analysis and distribution of concepts already formed and named, is insufficient for the synthetic processes by which we enlarge our knowledge of reality, and for the synthetic or ampliative judgments which enunciate the new knowledge acquired by our investigations. It is incompetent also for the scientific analysis of real things, to which the most intractable compounds reveal the secret of their elements. Modern science, empirical, philosophical and theological, has not been built up by the analysis of concepts and words.

3. Accordingly the three primary axioms of formal logic, the principles of identity, of non-contradiction and excluded middle, are not a sufficient basis for the logic of realistic thought engaged in the investigation of reality and the discovery and systemization of facts. These axioms of pure or formal thought are founded on the categories of unity, plurality and totality, which pertain to number without necessarily including any content of reality. But the principles of real thinking must carry reality through the whole process. Reality in its *individuality, diversity, complexity*, is much more than the mere forms of *unity, plurality, totality*. In realistic thinking, the judgment of identity expressed in the formula, *A is A*, is not the identical proposition, "*Whatever is, is*," which some logicians† have propounded as the first principle of all thinking. Rather it is the judgment that the *A* of thought is the intellectual equivalent of the *A* of reality; and this reality is not a general notion expressed by a name, but a concrete reality apprehended in the concrete qualities and activities which mani-

* *Cogitata Metaphysica*; Appendix Renati Descartes Principiorum Philosophiae. Pars prima, Cap. i. § 9. Bridges' Ed. Vol. i. p. 102.

† Prof. Jevons, *Principles of Science*, p. 5. See Ueberweg *Logik*, § 77.

fest what it is. It is the judgment which declares the result of simple apprehension; that is, it declares in respect to any portion of presented reality which has become the object of attention, what the reality is which the intuition has brought before the mind.

The realistic judgment of difference, A is not B, must not be confounded with the judgment of non-contradiction, A is not not-A. Two contradictories cannot co-exist; one excludes the other; but two objects that differ are both known to exist and to exist as different; the *other* is as real as the *one*.

The judgment of excluded middle, "everything is either A or it is not-A," in which formal thought is completed, recognizes the sum total of thought merely as a total of number. But a complex whole of reality is much more than a total of arithmetic, because the parts are individual realities differing from each other, and the relations which unite them are real and diverse. Of this no notice is taken in the formal thought which forms its totals by counting and rests on the maxim that the whole is equal to the sum of all its parts. This is a maxim of arithmetic which deals only with number, but not of science which deals with concrete realities. A family, a nation, a steam-engine is more and other than the sum of all its parts. The substitution of the empty forms of number, *unity*, *plurality* and *totality* for reality, with its *individualities*, *differences* and *relations*, and the errors consequent, are conspicuous in the writings of Hamilton; in consequence of which his "*absolute*" fluctuates between an arithmetical total, and a logical concept comprising all things and distinguished from nothing; his grand law of thought includes all that is conceivable in thought between two extremes contradictory of each other, and yet both necessarily believed; and his only resource to save reason from being entirely discredited by its own antinomies, is to recognize its impotence; so that the necessary beliefs of reason are resolved into the mind's consciousness of its own self-contradiction and incompetence.

Instead, therefore, of the law of excluded middle, which recognizes the universe merely as a numerical total composed of A and not-A, we have, in concrete thinking, the judgment, A is related to B, C, D, &c., in the unity of a complete whole. Or, all things exist in relation to each other in the unity of a complex whole or system.

4. To supplement the inadequacy of the formal logic Leibnitz suggested the additional principle of the Sufficient Reason; of which he says: "This principle is that of the need of a sufficient reason why a thing exists, why an event happens, and why a truth is held."* This principle may be accepted; not merely in the sense that thought must

* Fifth Letter to Samuel Clarke, § 125; also Theod. I. § 44.

account for every beginning or change by finding its cause, but in the broader meaning that thought must account for and explain all reality by its accordance with the truths, laws and ends of reason in the unity of a rational system. It is impossible for a rational being to rest in any thought as completed until this accord with reason is discovered.

Prof. Bowen proposes to reduce all these principles to two: "All thought must be consistent with itself;" "All thought must be consequent; that is it should never affirm or deny a union of two concepts without any ground for such affirmation or denial."* But this still keeps us within the limits of formal or abstract thought. The fact that thought is consistent with and consequent on itself does not prove it to be knowledge of reality.

5. The principles, which underlie realistic or concrete thought, and are the basis of a logical science of its laws, seem to be these:

(a) Thought must be consistent with reality as given in intuition.

(b) Thought must be consistent with itself. This is the positive form of the law of non-contradiction. While consistency of thought with itself does not prove it true, its inconsistency with itself or its self-contradictoriness proves it false.

(c) Thought must be consistent with the regulative principles of reason.

To these may be added three others, which may be called laws of things as well as laws of thought.

(d) Knowledge is correlative to reality. This, as has been shown, is of the essence of knowledge. Thought then must not only be consistent with intuition, carefully including all and excluding nothing which intuition gives, it must carry with it also the certainty that intuition rightly connoted is knowledge of reality.

(e) What is contradictory in thought is impossible in reality; or, stated positively, all particular realities are consistent with one another in reciprocal relations in the unity of a complex whole. Contradiction is no more possible in objective reality than in subjective thought. Co-existing realities are always compatible.

(f) What is contradictory to the necessary truths of reason is impossible in reality. The absurd cannot be real. Or, stated positively, all particular realities must be accounted for and explained to the reason as existing in a rational system consistent with the truths, laws, ideals and ends of reason.

6. These principles are at the basis of all scientific investigation. Science assumes them at the start. It starts with the assumption that things are concatenated, that there is unity in all diversity, and that

* *Logic*, pp. 48, 53.

every object in the universe exists in scientific or rational relations, whether it can or cannot be scientifically known by us. When a new animal, plant or mineral is discovered it is taken for granted that it can be scientifically classified; when a new fact is observed it is taken for granted that it can be co-ordinated under natural law. All science starts with the assumption that the universe is a rational system and that every reality in it must be in relation to other reality in that system; and, if accessible to our knowledge, may be found in its place in a system of scientific thought.

7. That advancement in science is made chiefly by the processes of concrete thought is true of philosophical and theological science, not less really than of empirical. Philosophy and theology are not the knowledge of propositions, notions and words, but of beings, their qualities, powers, conditions and relations; they are the knowledge of these in their accordance with the truths, laws, ideals and ends of reason, and in the unity of a rational system expressing the archetypal thoughts of the absolute and supreme reason. The object of religious faith is not doctrine, but the living God.

§ 14. Induction and the Newtonian Method.

A special consideration of induction is necessary not only on account of its intrinsic importance, but also because the students of the physical sciences are designating them as distinctively Inductive Sciences, thus appropriating the word and insinuating that induction is used in no other sphere of thought; it is necessary, also, because the word induction is now used ambiguously and confusedly to denote two distinct methods of reasoning. These two methods I shall consider in succession. The first I shall call *Simple Induction*; or, because Lord Bacon used the word induction to denote it, *Baconian Induction*; or, because until recently the word induction has commonly been used to denote this method, *Induction*, without any qualifying word. The second I shall call the *Newtonian Method*, because it was used by Sir Isaac Newton; or, the *hypothetical method*, because it begins with an hypothesis.

I. Simple induction is the inference that because all observed agents of a particular kind under certain conditions manifest a particular property or produce a particular effect, therefore all agents of the same kind, not hitherto observed, will, under the same conditions, everywhere and always produce the same effect.

1. By induction we extend our knowledge from that which has been observed to that which has not been observed.

What is observed is a uniform or unvaried sequence; that is, every agent of a particular kind, under particular conditions, so far as

observed, has always produced the same effect. The inference by induction extends our knowledge beyond observation to all agents of that kind under the same conditions wherever or whenever they thus exist. All observed specimens of oxygen combine with iron in certain definite proportions. By induction we infer that all oxygen in existence combines with iron according to the same proportions. A sequence observed in comparatively few specimens of oxygen and iron, is known by induction to extend to all the oxygen and all the iron in the universe. A sequence observed in comparatively few instances is known by induction to be a uniform sequence or law in all instances of the same kind.

Some logicians define "perfect induction" as the knowledge of a uniform sequence obtained by observing every existing individual of a kind; for example, our knowledge that all the planets of the solar system revolve around the sun. But this is not induction, it is mere observation. Induction always carries our knowledge from what has been observed to what has not been observed.

2. The principle on which induction rests is this: *The same complex of causes must always and everywhere produce the same effect.* By a complex of causes I mean the various causes and conditions which concur in producing an effect. These causes and conditions combined I call a "complex of causes." This accords with the maxim of logic, "*Causæ partiales in toto concursu stant pro uno.*" My statement of the principle, therefore, is scientifically exact; and it is necessarily and universally true. Rev. Dr. Wm. Thompson has stated the principle: "Under the same circumstances and with the same substance the same effects always result from the same causes." All that he specifies, however, is properly included in the "complex of causes."

This is a primitive principle regulative of all thought and known by rational intuition. It cannot be known by experience. It transcends experience. It is impossible for man to examine every portion of oxygen in the universe to learn by observation whether it supports combustion. No human experience can have observed every instance of bodies gravitating towards each other. No observation can bring within the knowledge of human experience to-day what will not happen till to-morrow.

Nor can this principle be itself established by induction. Dr. Wm. Thompson and J. S. Mill, though differing widely in their statements of the principle, both affirm that the principle itself is the result of induction.* But that the principle on which all induction rests should itself be the product of induction is as impossible as that a

*Thompson, *Outline of Laws of Thought*, p. 307; Mill's *Logic*, B. iii. chap. 3, § 1.

child should be its own father. Much confusion and error of thought have been occasioned by indefinite or incorrect statements of the principle on which induction rests. Perhaps the loosest statement is that used by Reid and Stewart: "Our intuitive conviction that the future must resemble the past." This is inadequate, because induction carries us beyond experience, not only into the future, but also into the past and into remote space; also because it does not define in what respect the future must resemble the past. Thus loosely stated it is not true. It is not true of civilization in every age and country, that the civilization of every future age will resemble it. It is not true that the sun will rise every twenty-four hours forever; nor that it has so risen in all the past. It is commonly said that the principle of induction is, that nature is uniform in its operations. This also is inadequate, because it does not define with scientific exactness what the uniformity of nature is. In fact some scientists have of late endeavored to escape being held to any exactness in stating it. Prof. W. G. Clifford speaks of two kinds of uniformity, *exact* uniformity and *reasonable* uniformity, of which he says even the first is not entirely exact.* Prof. Jevons also rests induction on a loose statement of the uniformity of nature. "The results of imperfect induction," (induction in which observation has not extended to every individual of the kind) "however well authenticated and verified, are never more than probable. We never can be sure *that the future will be as the present*. . . . It is the fundamental postulate of all inference concerning the future that there shall be no arbitrary change in the subject of inference; of the probability or improbability of such a change I conceive our faculties can give no estimate. . . . Inductive inference might attain to certainty, if our knowledge of the agents existing through the universe were complete, and if we were at the same time certain that the power which created the universe would allow it to proceed without arbitrary change."†

The principle of the uniformity of nature, exactly and correctly enunciated, is simply the principle on which induction rests, as I have already stated it. The uniformity of nature consists in the uniform or invariable sequence of the same effect, whenever and wherever the same complex of causes acts. A law of nature is simply the enunciation of this invariable sequence in respect to any particular complex of causes and its effects. Nature is uniform in the sense that its laws remain unchanged whatever be the changes in the actual succession of phenomena.

3. We can now distinguish induction from erroneous conceptions of it and its functions.

* Lectures and Essays, Vol. i. p. 141.

† Principles of Science, 3d Ed. pp. 149, 151, 239.

Induction does not guarantee the correctness of our observation either as to what is the complex of causes which produces an effect, or as to its factual continuance unchanged. Certificates of the efficacy of a nostrum in curing a fever are not a basis for induction, because there is no certainty that the medicine was essential in the complex of causes leading to the convalescence, and also because what is called fever in one case may have arisen from a physical derangement entirely different from that which caused what is called fever in another. The principle of induction is not "*post hoc, ergo propter hoc*." It presupposes an exact scientific determination of what the complex of causes is and of the uniform sequences in the cases observed.

Induction does not guarantee the continued action of any observed complex of causes. Another cause may arrest its energy, or disjoin its elements. Nor can induction inform us, in that case, whether or not the complex cause will ever reappear. Anthracite coal may be burned and the heat resulting be used to drive machinery. But the supply may some time be exhausted; then that particular complex cause will no more act. Lime and water combine and generate heat; but the water of the moon, if it ever existed there, has disappeared, and it is now impossible to slake lime in that satellite. Even a sequence known to have been invariable during the whole history of human experience may hereafter be interrupted. Causes already known may be in action which, if continued, must bring it to an end. "We are now told, in accordance with the views of Thompson and Mayer, that the earth is already oxidated or burnt through its crust half-way to the core; that it is grown so cool in the course of ages that it could not now melt a layer of ice ten feet thick in a hundred years; and that the lunar tides which act as brakes on the rotary motion imparted by its primordial heat must in time cause it to spin more slowly and feebly, until at length it shall flutter on its axis as a dead world like the moon, ever turning the same pallid face to the sun."* The sun will then cease to rise and set as it has done through all human history.

So long as no cause is known to exist which may disintegrate any particular complex of causes or arrest its energy, we believe that it will continue to exist. But even then we cannot predict its continuance with certainty; for some hitherto hidden potency may be discovered which will arrest its action. Scientific hypothesis has made us familiar with æthers which transcend sense; and already the conclusion of the authors of the "Unseen Universe" is seen to be possible; "that the

*Prof. Shields, *Final Philosophy*, p. 444.

available energy of the visible universe will ultimately be appropriated by the invisible, and we may now perhaps imagine, at least as a possibility, that the separate existence of the visible universe will share the same fate, so that we shall have no huge useless inert mass existing in after ages to remind the passer by of a form of energy and a species of matter that is long since out of date and functionally effete. Why should not the universe bury its dead out of its sight?"*

4. But all this brings no discredit on induction; because induction makes no claim to prove the continuity of the existence or action of any particular complex cause, and also because the law of nature remains unchanged, even after any particular agent to which it applies has ceased to act or to exist. The laws of nature are the same in the moon as on the earth, although water and living beings do not there exist. Whatever doubt may arise from suspicion of inaccuracy of observation or of the agency of unknown causes, the conclusions of true induction are of unerring certainty and universal application. The same complex cause, whenever and wherever it acts, must produce the same effect; and thus amid all the diversity of events nature in all its action is uniform and orderly under law.

5. The true principle of induction and of the uniformity of nature gives no support to the assertion that an event contrary to the previous universal experience of man is incredible and cannot be believed on any evidence. This assertion could have gained credence only when founded on some indefinite and incorrect statement of the principle, like that of Reid, that the future must resemble the past; it has no support from the principle of induction rightly understood. When potassium was discovered, the fact that it ignited in water was contrary to the universal experience of man that water extinguishes fire. Traveling on land forty miles in an hour, communicating by telegraph across the ocean, hearing words spoken across a large city were events contrary to universal experience until the respective inventions of the steam locomotive, the electric telegraph, and the telephone.

So far from conflicting with the uniformity of nature, the occurrence of unprecedented events is incidental to its progressive ongoing. The first plant, the first animal, the first man was each a new thing under the sun.

Hume urged the objection that a miracle is incredible because it is contrary to universal experience. The objection is without force against the true principle of induction and the true conception of the uniformity of nature.

II. When effects are observed while the cause and law are unknown,

* The Unseen Universe, pp. 118, 119.

science discovers the unknown cause and law by the method of hypothesis, deduction and verification; sometimes called the Newtonian method, because used by Newton in discovering that the law of gravitation extends to the whole solar system. He began with the hypothesis that gravitation, already known in the fall of bodies to the earth, extended also to the moon; he then deduced what must be the positions of the moon if the hypothesis were true; he then verified it by comparing the results of his deduction with the actual positions of the moon given in astronomical tables. The verification failed at first on account of errors in the tables, but was successful when the tables had been corrected by more accurate observation.

1. The Newtonian or hypothetical method differs from simple induction in its data, its method and its result. Its data are observed effects, whose cause and the law of its uniform action are to be discovered. The method consists of three reflective processes, hypothesis, deduction and verification. The result, if the hypothesis is verified, is the discovery of the hitherto unknown cause and its uniform action, that is, the cause and the law of its action.

2. The hypothetical method may be exemplified from the uses of it familiar in common life. It is the method of nomads and savages in their sagacious tracing of a trail; one of the many stories of this is the following. A camel driver looking for a lost camel asked an Arab whom he met if he had seen it. The Arab asked, "was it lame in its right fore leg, blind in its left eye, with a front tooth missing, and loaded with honey?" The camel driver said, "so you have seen it; and where is it?" The Arab protested he had not seen it, when the driver charged him with stealing it, and was proceeding to take him before an officer of justice. But the Arab explained that he knew it was lame, because the imprint of one foot was uniformly slighter; he inferred its blindness from its cropping the herbage on but one side of the way; he knew that the animal had lost a front tooth because at every bite a portion of the herbage remained uncropped; and the gathering flies where the honey had dripped made known the nature of the load.

This reasoning of the Arab is precisely in the hypothetical method. He observes the marks along the way and attempts to ascertain their cause; he makes the hypothesis that the cause was a camel described as above; he makes a deduction what sort of marks such a camel would make in passing, although from his familiarity with camels this part of the process would be so rapid he would hardly notice it; then he verifies his hypothesis by accurately observing the facts, and finds that they are precisely those which a camel with these characteristics would make.

Just so an investigator observes the complicated processes and effects

of nature, makes an hypothesis what the cause is and how it acts, deduces from this what the effect of a cause so acting must be, and then verifies the hypothesis by ascertaining whether the effects actually observed are those deduced.

The same method is used in discovering an anagram; as if one were required to find an anagram of *Terrible Poser* and discovers it to be *Sir Robert Peel*. It is noticeable that the one who is quick in discovering an anagram, is the one who *sees* it in the given letters; that is, he creates an hypothesis. On verifying the hypothesis he may find that it lacks a letter, or has one too many, and tries again. But the one who takes each letter in succession as the initial and tries to find all the possible combinations, proceeds slowly and, oftener than not, fails.

The same method is used in deciphering an inscription in an unknown character. The study of natural science is a deciphering of the book of nature.

3. The hypothesis is a creation of the imagination, and, in great discoveries and inventions, it is this creation which reveals the "vision and faculty divine of genius." If the marks of the camel had been confusedly intermingled with those of other animals along the same path, the Arab's problem would have been more difficult. But in nature the effects of many undetermined causes are thus intermingled. The observer must create in imagination a definite system in which a part of these heterogeneous facts shall be conceived as effects of a determinate complex of causes acting in accordance with a determinate law.

4. In creating a correct hypothesis the student is aided by knowledge already attained; as the Arab's knowledge of the camel's foot gave him a clew to the true hypothesis; as the trilingual inscription on the Rosetta stone gave to Champollion the clew for interpreting other hieroglyphics. It is only they who have been close observers of nature who are likely to make hypotheses worthy of examination. And they are aided to do it not merely by their knowledge, but by their trained habits of observation. They are aided also by analogy. Things which resemble each other in some particulars are conjectured to be alike in others. Thus Newton conjectured that the diamond would be found to be a combustible from its resemblance to known combustibles in its high power of refracting light. And Franklin conjectured, from the resemblance of thunder and lightning to the phenomena of the discharge of a Leyden jar, that they were effects of the same cause.

Hence scientific discovery and mechanical invention are not due merely to "the vision and faculty divine of genius," but also to painstaking observation, intellectual discipline and large acquisitions of knowledge. Says Tyndall: "It is by a kind of inspiration that we rise from the wise and sedulous contemplation of nature to the principles on which the

facts depend. The mind is, as it were, a photographic plate, which is gradually cleansed by the effort to think rightly, and which when cleansed, and not before, receives impressions from the light of truth. This passage from facts to principles is called induction, which in its highest form is inspiration; but to make it sure the inward light must be shown to be in accord with the outward fact. To prove or disprove the induction we must resort to deduction and experiment."*

5. For the verification of an hypothesis there are two requisites. After deducing from the hypothesis all the results implied in its truth, all the facts must be found by observation to correspond. Also, there must be no other hypothesis with the deduced results of which the facts equally correspond. There were formerly two hypotheses as to electricity, Franklin's and Dufay's. Neither of them sufficiently accounted for the facts; both are displaced by the present hypothesis. There were two hypotheses of combustion, that of phlogiston and that of oxygen. After long and sharp controversy among scientists, the latter has displaced the former. When an hypothesis is verified in both of the ways indicated it is considered to be scientifically established.

Verification is sometimes possible in a third way, by bringing the hitherto unknown agent under actual observation. So the existence of a planet beyond Uranus was inferred by the hypothetical method and the planet was afterwards discovered. In most cases the object sought cannot be brought under direct observation by any means which man can command. Nor is this necessary to the scientific verification and establishment of the hypothesis. The law that gravitation acts with a force directly as the mass and inversely as the square of the distance is suggested by mathematical principles and verified by the accordance with it of the movements of the heavenly bodies, and is thus scientifically established beyond all doubt. But it is forever impossible by any weighing or mechanical testing of forces to establish it by direct observation. It is equally impossible to establish the law of the conservation and correlation of force by direct observation of the molecular action into which the motion of masses is transformed, or of the transformations of molecular action, as from electricity into heat. In like manner the hypothesis of the æther can never be verified by direct observation of the æther. There is no ground for the assertion that inference by the method of hypothesis is not established until the agent and sequence sought are brought under direct observation; and the demand for verification in this third way is no more imperative in philosophy and theology than in empirical science. And yet it is continually being demanded as essential in the former by those who in physical science freely

* Fragments of Science, p. 60.

accept hypotheses as established which do not admit of verification in this third way. The value of the method is in carrying our knowledge beyond the range of observation.

6. The hypothetical method rests on the intuitive principle that every effect must have a cause adequate to produce it.

7. The hypothetical method is of fundamental importance in all scientific investigation. It has been used in scientific discovery in all ages; and with success corresponding not merely to the genius of the discoverer, but to the degree and exactness of knowledge and the habits of accurate observation guiding him in creating his hypothesis. Thus Archimedes hypothetically referred the conditions of equilibrium on the lever to the conception of pressure, while Aristotle could see in them only the strange results of the properties of the circle; Pascal adopted correctly the hypothesis of the weight of the air which his predecessors had referred to nature's horror of a vacuum; Vitellio and Roger Bacon referred the magnifying power of a convex lens to the refraction of the rays towards the perpendicular, while others conceived it to result from the matter of the lens irrespective of its form. In view of such facts Whewell says: "Facts cannot be observed as facts except in virtue of the conceptions which the observer himself unconsciously supplies; and they are not facts of observation for any purpose of discovery, except these familiar and unconscious acts of thought be themselves of a just and precise kind. But supposing the facts to be adequately observed, they can never be combined into any new truth, except by means of some new conceptions, clear and appropriate."* To the same purport are the words of Comte: "No real observation of any kind of phenomena is possible, except in so far as it is first directed and finally interpreted by some theory. . . . Scientifically speaking all isolated empirical observation is idle and even radically uncertain; science can use only those observations which are connected at least hypothetically with some law. . . . Facts which must form the basis of a positive theory could not be collected to any purpose without some preliminary theory which should guide the collection. Our understanding cannot act without some doctrine, false or true, vague or precise, which may concentrate and stimulate its efforts and afford ground enough for speculative continuity to sustain our mental action."†

8. The Newtonian method is now commonly called induction. The simple induction recognized by Bacon is the only induction which, as peculiar and distinct from all other processes of reasoning or of

* *Philosophy of Inductive Sciences*, Vol. ii. pp. 189, 206.

† *Cours de Philosophie Positive*, Tom. iv. pp. 418, 665, 667. *Léçons* 48, 51. Martineau's Translation, pp. 475 and 525.

thought, is entitled to the name. It is this which until recently has been called induction.

The application of this name to the Newtonian method increases the confusion of thought which has existed on the subject, and misleads by pushing the real induction into the background and giving its name to a complex process each of whose three subordinate processes is already known by its appropriate name, hypothesis, deduction, verification. The first is a creative act of imagination, the second is deduction and cannot at the same time be induction, and the third is observation and a comparison of what we observe with what we have deduced. Prof. Jevons regarding this process as induction, is driven to the conclusion, "If I have taken a correct view of logical method, there is really no such thing as a distinct process of induction."*

The reaction against the Baconian induction in recent scientific thought is worthy of attention. It is remarkable that it is against the induction of Lord Bacon, so long glorified as the epoch-making thought which rescued the human mind from the hypotheses and deductions of scholasticism and metaphysics, and turned it in the direction of discovery and of useful knowledge. It is remarkable that the reaction is to the methods of hypothesis and deduction, once so much under opprobrium as the methods of metaphysics that the appellation "inductive," with the Baconian meaning, was given to the physical sciences as marking their distinctive preëminence. Newton himself, with singular unconsciousness, felt obliged to utter the disclaimer, "*hypotheses non fingo*;" and later discoverers by the hypothetical method have apologized for its use. Since the physical sciences have claimed and do claim preëminent and even exclusive certainty and value as being founded on observation, it is remarkable that this reaction is away from this recognition of the preëminence of observation and to a depreciation of it as "idle and even radically uncertain," and of no scientific "use," except as "directed and interpreted by some theory." And it is remarkable that after all this reactionary change, scientists insist on applying the old name induction to the method of hypothesis, deduction and verification, as if fearing that the physical sciences would lose prestige if they were known to be preëminently sciences of hypothesis, deduction and verification called by their proper names. "Wide is the range of words this way and that."†

9. Neither induction nor the hypothetical method is peculiar to investigations in physical science. Each is a method spontaneously used by the human mind in investigations in sciences of every kind and in

* Princ. of Science, p. 579.

† Ἐπέων δὲ πολλὰς νομὸς ἔνθα καὶ ἔνθα. Iliad xx. 249.

the common affairs of life. Lord Bacon did not invent nor discover the method of induction. It had always been in use. He guarded the minds of men against false reasoning, turned them to the study of persons and things rather than of notions and words, and to the study of reality in its bearings on the conduct of life and the welfare of man. Newton did not discover nor first use the hypothetical method. Descartes distinctly recognizes it in his "Dissertatio de Methodo;" and it was used in discoveries both by Lord Bacon's predecessors and successors. Lange, after noticing these facts, makes the extraordinary mistake of saying that "Newton reverted to Bacon."* The truth is that, independently of all logical theories, this method and the simple induction of Lord Bacon are the methods spontaneously used by the human mind in investigating facts, whether in science or in the practical affairs of life.

10. Correct hypotheses and the discoveries involved in them have often been suggested by genius, long before the hypotheses have been verified and the discoveries made. Very striking is Lord Bacon's anticipation of the modern discovery that heat is motion. In explaining his suggestion of this fact, he says emphatically; "it must not be thought that heat generates motion or motion heat (though in some respects this be true) but that the very essence of heat, or the *substantial self* (*quid ipsum*) of heat is motion and nothing else."† Descartes anticipated the vortex rings of Sir Wm. Thompson.‡ Aristotle anticipated Columbus. He says that the earth must be spherical, and proves it from the tendency of things in all places downwards and from the spherical form of the earth shown in eclipses of the moon; and he argues that it is comparatively small, because in traveling north or south the position of the stars changes, and stars are seen in Greece or Cyprus, which are not seen in countries further north; and then says; "Wherefore we may judge that those persons who connect the region in the neighborhood of the pillars of Hercules with that towards India and who assert that in this way the sea is one, do not assert things very improbable."§ Anticipations of scientific discovery sometimes come from speculative philosophy. Schelling suggested the identity of the forces of magnetism, electricity, and chemical affinity;|| Kant in his *Naturgeschichte des Himmels* anticipated the nebular theory of Laplace. Sometimes these anticipations

* Geschichte des Materialismus, i. 239, 240.

† Novum Organum, B. II. 20, Basil Montagu's Edition.

‡ Wurtz, Atomic Theory; Cleminshaw's Trans. p. 329.

§ Aristotle de Coelo, Lib. 14, Ed. Casaub. p. 290, 291, quoted Whewell Hist. of Inductive Sciences, Vol. I. p. 133.

|| Whewell's Philosophy of the Inductive Sciences, B. V. Chap. II. 12.

are made by poetical genius. Milton anticipated the extension of the law of attraction to the solar system :

“ What if the sun
Be centre to the world ; and other stars,
By his attractive virtue and their own
Incited, dance about him various rounds.”

§ 15. Relation of Reflective Thought to Intuition.

I. Reflection or thought gives no elemental object of knowledge. The objects about which we can think are all first given in intuition.

1. This maxim is true only when intuition is understood to include sense-perception, self-consciousness and rational intuition. The maxim that all the elemental objects of thought are given in the primitive knowledge is not disputed in any school. The difference is as to the range of the primitive knowledge. If it is limited to sensible objects then thought can concern itself with these alone. If man also has intuitive knowledge of himself in his various mental acts and states, then these are legitimate objects of thought. If he has also intuitive knowledge of principles of reason asserting themselves in his consciousness and regulating all his thinking, then he must take cognizance of reason, and its fundamental realities, truth, law, perfection, worth, the absolute, as “for us”* positively known as the fundamental reality, the supreme and transcendent truth ; and must connote all particular realities in their relations to these universal and all-regulative norms.

Pertinent here and profoundly significant is the seemingly playful definition which Socrates gives of thought. It is “the conversation which the soul holds with itself. The soul when thinking appears to me to be just talking ; asking questions of itself and answering them.”† To the empiricist thought is inspecting, weighing and measuring that which seems external to us. But in truth it is only under the regulation of the principles and laws of reason that thought can conclude in knowledge or comprehend the outward in science. Thought is “the large discourse of reason,” and is fruitful only because “mind is the measure of all things.” It is fruitless surveying which takes no note of the relation of the surface to the chain by which it is measured.

2. The maxim is true only of the primitive or elemental realities. These realities can be defined or described only by referring to the person’s own intuitive knowledge of them ; as the odor of a rose or the

* “I am far from implying that a supra-sensible does not exist. I only affirm that it does not exist *for us* as an object of positive knowledge, though forced upon us as a negative conception.” Lewes : Problems, &c., First series, Part II. Problem I. Chap. III. 26. Vol. i. 229. Vol. ii. p. 9.

† Theaetetus, 190.

taste of honey; the person's own reason, free will and affections; the primitive principles which he necessarily believes, and which regulate his thinking; power which himself exerts; bodies extended in and occupying space known by resisting his own power. Thought can create new combinations of the reality known in intuition; but it cannot put into the creation any new element of reality not intuitively known; for example, qualities of bodies which might be perceived by a sixth sense.

II. Within these limitations knowledge is greatly enlarged by reflective thought.

Thought apprehends, differentiates and comprehends the nebulous matter given in intuition, and thus makes knowledge definite, distinct and systematic.

Thought stimulates and guides the use of our intuitive power in observation, invents instruments to aid our senses, and thus leads to the discovery of reality before unknown.

Thought gives us knowledge through general notions and language, and gives us also the sciences of grammar, philology, logic and rhetoric, which treat of thought and language.

From the forms of space and number thought develops the whole of mathematics, geometrical and arithmetical; and applying its demonstrations to nature in quantities of time and space measures everything from the action of molecules and the time of conveying sensations, to the masses and motions of planets and suns.

Thought discovers properties, laws and bodies, of the same kind with those already known, which have never been known by observation. From the knowledge of a property in a few bodies of a particular kind induction infers the existence of that property in all bodies of the same kind. From effects we infer causes; as the spectroscope reveals in the sun gold, hydrogen, and other varieties of matter well known on earth; as arrow-heads and other implements reveal the early existence of man and subvert the previous fixed belief of mankind; as fossils and strata reveal the history of the globe through strange mutations and innumerable ages before any man existed to observe them. From causes and known laws we can deduce effects and sequences. By resemblances, analogies, and a knowledge of many facts it is possible to create in imagination hypotheses; and the creations of man's imagination are found to be the same with the creations of God embodying his own ideas in nature.

Thought discovers new simple bodies which have never been observed before. Crooke observing a new line in the spectroscope affirmed the existence in the sun of an unknown metal, which was afterwards discovered on earth and named Thallium. Frankland and

Lockyer on similar evidence announced an unknown substance which they proposed to call Helium.

Thought infers and recognizes as the basis of science the existence of extra-sensible reality, of bodies so small and motions so rapid that the senses cannot perceive them; as molecules and æthers; vibrations of air so rapid that the ear cannot hear them, and of light so rapid that the eye cannot see them. It also discovers the action of gravitation, the law of which could never have been discovered by observation, which is seemingly a force exerted by a body where it is not present, which is not obstructed by interposing bodies, which seems to act instantaneously so that every body in the universe instantly takes cognizance, so to speak, of the change of position of every other body and moves accordingly, and which acting continuously is never expended, never fed, never reproduced. These and similar results are entirely beyond the range of human senses and observation, and cannot even be pictured in imagination. Some of them seem contradictory and impossible. Yet after citing some of these inferences and calculations of science, Prof. Jevons says: "We see that mere difficulties of conception must not discredit a theory which otherwise agrees with facts." But certainly if thought can establish as science results like these transcending all observation, then the hypothesis that there is a spirit in man is a legitimate hypothesis and may be established as a well-grounded basis of belief and action.

Thus thought reveals reality before unknown and enlarges knowledge. We may say that there is nothing in a woolen garment except what was first in the wool. The process of carding which separates the fibres and arranges them parallel to each other, the spinning that twists the fibres into yarn, the weaving which unites the yarn into cloth, the skill of the workman who cuts it into a garment have indeed acted only on the material that was in the wool, and yet there is very much in the garment which was not in the wool. So it is with thought. A guest in a great house rich in furniture, paintings and bric-a-brac will day after day discover previously unnoticed articles of interest which have all the time been before his eyes in the rooms. So is mankind in the universe, from generation to generation, making new discoveries of its richness. These scientific discoveries are mostly made by thought. The larger part of every science consists of facts, generalizations, laws and inferences never discovered by observation or even transcending the range of observation. Says Lewes: "We have positive proof that the sensible world comprises only a portion and an insignificant portion of existence . . . there is therefore an extra-sensible existence revealed through various indications. . . . We must ascertain how the vast outlying province of the invisible can be

accessible."* It is true that the heavens disclosed their glory to man in his savage state and that all the great movements of planets and stars went on before his eyes. But it would be foolish to say that all that is contained in modern astronomy was given in the intuition of savage man, or in the mere intuition of any man. Yet it is true that every elemental reality about which we think in all sciences is given in intuition.

III. The mind can project its thought into the unknown only by retaining firm foothold in the known.

"Of God above or man below,
What can we reason but from what we know?"

It is impossible to have positive thought of anything except as we attribute to it something already known. This is exemplified by the partial agnostics who admit the existence of absolute being, but affirm that we can have no knowledge what it is. Prof. Tyndall says: "The whole process of evolution is the manifestation of a power absolutely inscrutable to the intellect of man."† With singular simplicity and unconsciousness he affirms absolute inscrutableness, and yet defines the inscrutable object as "*a power*" and declares that it is a manifested power. H. Spencer says: "We are obliged to regard every phenomenon as a manifestation of some power; phenomena being, so far as we can ascertain, unlimited, we are obliged to regard this power as omnipresent; and criticism teaches us that it is wholly incomprehensible."‡ Here again an object "*wholly incomprehensible*" is declared to be a *power*, and a power that is *manifested* and *omnipresent*. These men delude themselves with supposing that they can rest their thought respecting the great problem of the universe in the partial agnosticism which affirms the existence of the absolute ground of the universe but denies all knowledge of what that absolute ground is. In the very affirmation of their ignorance of what this absolute ground of the universe is they are obliged to use language attributing to this unknown, properties already known. Thought can enlarge the area of knowledge; but it is a law of thought that the unknown can be discovered only in some unity of thought with the already known.

But Mr. Spencer further says: "Though the absolute cannot in any manner or degree be known, in the strict sense of knowing, yet we find its positive existence is a necessary datum of consciousness; so long as consciousness continues, we cannot for an instant rid ourselves of this datum; and thus the belief which this datum constitutes has a higher

* Problems of Life and Mind, Vol. i. pp. 238, 233.

† Address before British Association in Belfast, 1874.

‡ First Principles. Part I. Chap. v. § 27, p. 98.

warrant than any other whatever."* But since Mr. Spencer himself cannot retain the thought of this absolute being without attributing to it known qualities, it follows, on his own principles, that the fundamental datum of consciousness, the best warranted of all beliefs, is the belief in the existence of absolute being having one or more known attributes. And if it is legitimate and necessary for Spencer and Tyn-dall to affirm that the absolute being is a power, because it is the ultimate ground of the power manifested in the universe, it is equally legitimate and necessary to affirm that the absolute being is a rational power, because it is the ultimate ground of the rational power manifested in the universe. And while the partial agnosticism thus contradicts and nullifies itself, the theist is entirely self-consistent. While he holds with Spencer that the existence of the absolute is a necessary datum of consciousness and, as thus given in intuition, a real object of thought, he also holds that, since it is the original ground or cause of the universe, it must contain in itself the original potencies which account for all that is manifested in the universe; therefore must contain the potency of reason not less than of power. And this is a legitimate process of thinking, respecting an object already given in intuition, by inferring the unknown from the known.

IV. Reflective knowledge is always preceded by primitive or spontaneous knowledge.

Knowledge given in intuition and retained and represented in memory, may be called spontaneous, implicit or unelaborated knowledge; after its objects have been apprehended, discriminated and integrated in thought, it may be called reflective, explicit or elaborate knowledge. The spontaneous knowledge is sometimes called belief or faith.

That reflective knowledge must always be preceded by implicit or spontaneous knowledge is a necessary inference from our discussion. The principle may help us in deciding the old question whether faith precedes intelligence.

1. If the spontaneous knowledge is called *faith* or *belief* and the reflective knowledge is called *intelligence*, then the maxim is universally true that faith must precede knowledge (*crede ut intelligas*). Many writers designate rational intuition as faith or belief; these intuitions are frequently called primary beliefs. Others give the name faith or belief to both rational and presentative intuition. Among these are Clement of Alexandria, and in modern times, F. H. Jacobi, J. G. Fichte and Rothe. To these may be added Dr. Dorner, who says: "Jacobi rightly says that even our certainty of the world of sense is a faith" (ein Glauben).† So far as the word faith is used to

* First Principles, p. 98, § 27.

† Christliche Glaubenslehre, § 1; 2. § 4; 6.

denote all primitive knowledge it is true that faith precedes intelligence or reflective knowledge. But only in this sense is the maxim admissible as true.

Thus understood, the maxim cannot be assumed to mean that intuition, because it is called belief, is less really knowledge than the intelligence elaborated by reflective thought. Since all the objects of thought and all the principles which regulate thinking are given in intuition and all inference is from the known to the previously unknown, thought can never lift itself to a certainty and reality of knowledge above that of intuition, but can reach only a greater clearness, definiteness and comprehensiveness of systematic knowledge. There can be no more stability in the superstructure, however high, than in the foundation. Intuitive knowledge and reflective do not differ as knowledge, but only in the fact that the former of the two is self-evident knowledge, the latter is the result of a process of thought. Whether the names *faith* or *belief* shall be given to the former instead of or in addition to the names intuitive, or primitive or spontaneous knowledge, is not a question of psychological fact, but of nomenclature. One obvious objection is that, if the name knowledge is withheld from intuition and memory and given only to reflective intelligence, the impression must be made that the latter alone is knowledge and the former is not. In fact this impression is widely spread.

But we cannot change a common use of language. Therefore in this application of the terms faith and belief, they should be used interchangeably with intuitive, self-evident, primitive knowledge and similar designations; thus showing that they mean nothing less than knowledge and are applied alike to primitive knowledge in every form, whether presentative or representative, whether the intuition of the outward world, or of ourselves in our mental operations, or of universal principles, or of the existence of absolute unconditioned being.

It follows that the maxim that faith precedes intelligence has no peculiar application to religious knowledge. This like all other knowledge begins as primitive, implicit, spontaneous knowledge, and is elaborated into clear, definite and systematic knowledge. This fact does not disparage the reality of religious knowledge any more than of all other knowledge; for all knowledge begins in the same way. Physical science begins in faith as really as theology. If we choose to call the primitive, implicit religious knowledge *faith*, our giving it that name does not change its character as knowledge, nor distinguish it as different in this respect from other knowledge.

2. The recognition of a faith-faculty as the distinctive organ of religious knowledge is inadmissible.

The very conception of a "faculty" is false and misleading. The mind no more has faculties than oxygen or electricity. The mind in its indivisible oneness reveals itself in acts and processes which we can note and classify. From this misconception of the mind as divided into faculties the doctrine of a faith-faculty derives its chief significance. It is usually urged by persons who already admit that God is not properly an object of knowledge and who grasp at a faith-faculty whereby to retain their hold of him in an indeterminate and uncertain belief.

If, however, the advocate of a faith-faculty has divested himself of these misconceptions and uses the word faculty merely as a convenient name for the mind as it manifests itself in a certain class of operations, still there is no place for a faith-faculty. For intuition presentative and rational, includes all primitive and self-evident knowledge; and if the knowledge of God is neither primitive nor reflective knowledge, but a faith distinguished from both, then again it is excluded from knowledge properly so called and stands by itself as a belief that is not knowledge. Accordingly, this belief which arises from the faith-faculty is often divorced from the intellect and avowedly grounded in feeling alone. But beaten on by the fierce intellectual light of the present time religious belief cannot live if avowedly it is cut off from the intellect and has not its roots in reason. Such a belief concedes every thing to the skeptic who admits that religious sentiments are constitutional to man and that man may properly shape an object for them in the imagination varying with the culture of each age; but who strenuously refuses it any place in the sphere of the intellect and of knowledge. Thus the doctrine of the faith-faculty acknowledges an unresolvable antithesis of reason and faith. On the contrary, the demand of the age and the work imperative on theism is to demonstrate the synthesis of faith and reason. This can be done only by showing that faith in God is itself the act of reason in the highest manifestation of its rational power. And it may also be shown that human reason must have the knowledge of reason absolute and supreme in order to maintain its own rational power to know.

As man knows himself rational, so he knows himself religious. As he knows himself in contact with the external world through sense, so he knows himself in contact with God through his spiritual constitution. In the normal unfolding of his own constitution he finds himself in the presence of absolute being. In the normal unfolding of his consciousness of himself he finds in himself the consciousness of God. The primitive knowledge of the Absolute is a part of his primitive knowledge through intuition. All primitive knowledge is more or less mixed with feeling; there is primitive knowledge in all feeling. But

this is not peculiar to religious knowledge; it is equally true of all knowledge.

The denial of a special faith-faculty as the organ of religious belief, and the identification of religious belief with primitive knowledge does not deny the dependence of our knowledge of God on the awakening of the spiritual life by the testimony of the Holy Spirit, or by any influences which quicken and illuminate the human mind; nor does it deny the knowledge of God in experience whereby we acquaint ourselves with him and are at peace. However this knowledge is originated it must follow the law of all knowing; it must begin as primitive, implicit, unelaborated knowledge, merged in the religious experience and not at first clearly apprehended in consciousness, nor discriminated, defined and integrated in a system. The defenders of Christian theism, who admit that theism rests on a faith which is not knowledge, are misled by a false theory of knowledge and surrender the very citadel of their defences. The late Professor T. H. Green, of Oxford, truly said: "Under different relations and in different modes of itself, reason is the source alike of faith and knowledge." . . . "Christianity is cheaply honored when it is made exceptional; God is not wisely trusted when declared unintelligible.

‘Such honor rooted in dishonor stands;

Such faith unfaithful makes us falsely true.’

God is forever reason; and his communication, his revelation is of Reason." The empirical knowledge of nature rests on faith in the same sense in which theism rests on faith.

3. The word *faith* has been used with various meanings; and this is a reason why, so far as possible, we should avoid using it as a synonym for intuition or primitive knowledge. It is used to denote trust which is the condition of justification; also to denote belief of testimony on the authority of the witness; also belief on the authority of the Church or of divine revelation. The maxim "*crede ut intelligas*" has as many different meanings, each of special application, and each irrelevant to the general question which we are considering as to what precedes reflective knowledge in general or reflective religious knowledge in particular. Hence has arisen great confusion in the discussion of the subject. Thus Hamilton confuses himself. After naming many philosophers, ancient and modern, who have used the words *belief* or *faith* to denote "The original warrants of cognition," that is, the principles of rational intuition, he adds the following: "St. Augustine accurately says, 'We know what rests on *reason*; we believe what rests on authority.' But reason itself must rest at last on authority; for the original data of reason do not rest on reason, but are necessarily accepted by reason on the authority of what is beyond itself. . . . Thus we must

philosophically admit that belief is the primary condition of reason, and not reason the ultimate ground of belief. We are compelled to surrender the proud '*Intellige ut credas*' of Abelard, to content ourselves with the humble '*Crede ut intelligas*' of Anselm."* The quotation is entirely irrelevant, for Augustine is speaking of the authority of the Church. The same is true of Anselm and Abelard. The doctrine early appeared that the church had authority to declare the mind of the Spirit and the meaning of the word of God. The "*crede ut intelligas*" then meant, Believe implicitly what the church teaches without personal investigation and conviction of its truth. The intelligence of reflective thought following the belief was merely a reverent ascertaining of what the church meant. Abelard asserted the right to investigate the truth of the doctrine of the church before believing it. It is curious to note the special pleading by which Hamilton endeavors to apply this utterly irrelevant definition to "the original warrants of cognition."

At the Reformation the Bible as the word of God, accredited and illuminated by the testimony of the Spirit, was recognized, instead of the church, as the authoritative rule of faith and practice. But the testimony of the Spirit gradually receded in the Protestant theological thinking until the letter of the scripture, supposed according to an arid theory of verbal inspiration to be itself the testimony of the Spirit, was recognized as the authoritative rule of faith and practice, and thus became the formal principle of Protestantism. Belief in this was demanded as pre-requisite to intelligent investigation of Christian truth.

It is evident that these special applications and peculiar meanings of the maxim are entirely irrelevant to questions concerning the relation of reflective knowledge to primitive, the true conception and proper designation of primitive knowledge, and the reality of religious knowledge and its legitimate place in the circle of human intelligence.

4. Knowledge through the belief of testimony is reflective knowledge because it is attained by the interpretation of symbols. It can never be intuitive or primitive knowledge. It may be said, however, that man is constituted susceptible of receiving knowledge by testimony. A man cannot be defined from his individual personality alone. He is a member of a race which is constantly in contact with him and acting on him at many points; and he is constituted susceptible of receiving these influences. Only as this fact, complementary to his personality, is recognized can man be understood. His susceptibility of receiving knowledge through testimony is one of these points of contact with the race. The child believes everything. We do not

* Reid's Works: Hamilton's Ed. Note A, page 760.

learn to believe but to disbelieve. The consciousness of the race always in contact with the individual seems to infuse itself into his individual consciousness and enlarge it to a world-wide knowledge. In this way the knowledge of past generations is communicated to the living and knowledge is continually enlarged. Principles and laws and science get incorporated into customs, institutions and civilizations and are thus perpetuated. Were it not for this power of participating in the consciousness of the race, men would remain through all time at the lowest grade of savagery; or rather man could not have continued to exist on the earth. Testimony, in its broadest sense as denoting all communication of knowledge from man to man, is an important medium through which knowledge already elaborated by others is communicated to us and received in its elaborated form.

V. Reflection and experience become a sort of spontaneous knowledge in common sense. The Philosophy of Reid is called the philosophy of common sense. The phrase here means the *sensus communis* of mankind, and refers to the principles believed or at least acted on by all mankind. Thus used "common sense" is essentially the same with intuition. There is also a popular and homely use of the word in which it has a different meaning. This Locke speaks of as "large roundabout common sense." This is continually appealed to as a source of knowledge, especially in the practical direction of conduct. It is a knowledge by which a man judges what action is wise, while unable to tell why he believes it to be so. I suppose it to be the result of the experience and reflection of life, which has inwoven itself into the texture of knowledge and acts with the quickness and insight of an intuition and with the unconsciousness of an instinct. Customary action tends to become automatic. What was learned with painstaking, as speaking a language, tends to become spontaneous. What was once the slow result of thought, may come, by long experience and hereditary transmission, to act with unerring unconsciousness as an instinct. So common sense may be the past experience half sunk already into an instinct and spontaneously indicating what it has always found to be wise. It is not an intuition, since it is always possible even at the moment to think that the contrary may be true. It is not unerring. But the continual appeal to it is not unphilosophical; and it should be noted as a source of knowledge, which can only remotely be resolved into intuition, memory and thought.

§ 16. Relation of Reflective Thought to the Universal Reason.

The processes of reflective thought essentially imply that the universe is grounded in and is the manifestation of Reason. They thus rest on the assumption that a personal God exists.

I. This assumption is the ultimate ground of the possibility of knowledge by inference. If the mathematics by which astronomers make their calculations are not the mathematics of all space and time, all our astronomy is worthless. If the law of causation, and the principle of the uniformity of nature that the same complex of causes always produces the same effect, are not true of the whole universe, all our science is invalidated. If the law of love is not the law of all rational beings all ethical knowledge is annihilated. That the principles of reason are everywhere and always the same is the basis of the possibility of rational knowledge. But this is only saying that Reason supreme and universal, everywhere and always one and the same, is energizing in the universe and is the ultimate ground of its existence, constitution and development. And this Energizing Reason is God. Science assumes that the universe is a system or cosmos concatenated and ordered under principles and laws everywhere and always the same, and that by these it can determine what the ongoing of the universe is in its farthest extent in space and what it has been and will be in the remotest past and future. This is possible only because these truths and laws are eternal in the one absolute Reason who expresses them by his energizing in the constitution and evolution of the universe. And the theist adds that the evolution of the universe is the forever progressive expression and realization, not only of truths and laws, but also of rational ideals and ends; ideals and ends of wisdom and love, which are eternal and archetypal in the Absolute Reason, God.

Like this was the position of Descartes. He recognizes, at the basis of all reflective intelligence, primitive beliefs on which the force of all proofs depends and without which man is condemned to irremediable doubt; he sees that these fundamental principles thus necessarily believed must have their reality in God, and that if God does not exist, our reason has no guaranty; and he proclaims God, as the first and the most certain of all truths. Thus the existence of God, the absolute Reason, is the ultimate ground of the possibility of scientific knowledge. This rests on the truth that the universe is ultimately grounded in Reason, that it is constituted and goes on in accordance with rational truths and laws, and for the realization of rational ideals and ends. It implies also that we have knowledge of reason and of its truths, laws, ideals and ends; that the primitive intuitions of human reason are true; that the necessary and universal principles constituent of human rationality are constituent principles of rationality which is universal and supreme. Without this neither induction nor the Newtonian method can conclude in real knowledge. "This includes the assumption without which the principles, maxims and methods of the inductive philosophy have no meaning and no foundation, viz. that the universe of mat-

ter and mind has its ground and explanation in an intelligent creator. In other words, Induction rests on the assumption, as it demands for its ground, that a personal Deity exists."*

II. It is only on this assumption that thought can complete its necessary processes and solve its ultimate problem.

1. The necessary process of thought culminates in comprehending the manifold in unity; its ultimate problem is to comprehend all particular realities in unity; that is, to comprehend the all in one. In its necessary processes of apprehending, differentiating and comprehending, it continually finds larger and larger unities, till it comes to its ultimate problem to comprehend all the manifold in a unity of thought.

2. It cannot comprehend the all in a merely numerical unity, but only in the unity of a rational system. A numerical unity would be only a multitude of disintegrated individuals, excluding their real relations, their causes, interaction and laws; and so would not be the unity of the All.

The objects of thought are the actual beings and realities of the universe in their actual relations. They cannot be comprehended in unity till we know their cause or ground, and their sufficient reason. The mind must know the absolute ground of all that is and the accordance of all things with the truth, laws, ideals and ends of reason. The ultimate problem of thought is to find the unity of the all in a rational system.

3. This unity is possible only in the recognition of a personal God. The mind cannot find the ground or cause of all that begins and changes in that which itself begins and changes, but only beyond in the Absolute Being who never begins but is eternally the same. It cannot find the sufficient reason or rationale of things in the facts of experience but only in their accordance with principles, laws, ideals and ends which are eternal in Reason absolute, perfect and supreme. For if these are not eternal in the absolute ground of the universe they are not in the universe at all, and the scientific and philosophical knowledge of the universe as a rational system is forever impossible. This absolute Reason which is the ground or cause of the universe is what theism calls God. Theism, therefore, is the only possible solution of the ultimate and ever-urgent problem of human intelligence. Theism is not a creation of feeling and fancy excluded from the realm of knowledge. If recognized as knowledge it is not a mere appendix to completed science, which those may study who wish, while those who do not concern themselves with it suffer no intellectual loss. On the contrary it lies at the foundation of all science and philosophy, and

* The Human Intellect; by President Porter, § 497.

without it thought cannot complete itself as knowledge nor solve its own necessary problems on any subject whatever. Theology is not occupied with abstractions, but with the deepest realities both of nature and of man.

Skeptics continually miss the theistic conception that the universe is grounded in absolute Reason, and charge on theism the conception that the universe is grounded in caprice, that is, in will unregulated by reason. Even Prof. Jevons, from whom a more correct idea of theism might be expected, in a passage already quoted, twice uses the phrase "arbitrary change" as describing the action of God.

Krug calls attention to the fact that the relation of reason and consequent is different from that of cause and effect.* Hamilton criticises Leibnitz's "*sufficient reason*" because it includes both the reason why things exist, and the reason why we think them to exist. But if reason is the organ of principles or truths and not merely an organ of contradictions revealing only its own impotence, then the law of causality is at once a law of thought and a law of things; and the same is true of all the necessary principles of reason; then in concrete or realistic thought a logic of reason must be recognized as underlying the formal logic; then the fundamental basis alike of all being and of all thought is absolute reason energizing with almighty power in accordance with its own eternal laws, expressing its own eternal truths, and realizing its own ideals and ends. And this is the theistic conception of the universe. The study of the universe gives us science because its beginning and its ongoing express perfect and eternal reason.

III. The primary motive of scientific investigation is in the constitution of man as rational, impelling him to seek the knowledge of all things in their reality, difference and relations, and to comprehend them in the unity of a rational system. He is impelled by his constitution as rational to seek the unity of all things in their cause or ground and their rational principles, laws and ends. The three questions of philosophy, according to Kant, are these: "What can we know? What shall we do? What may we hope?" The second and third of these questions of course present motives to seek the answer to the first. We seek knowledge to guide us in our action and to disclose the ends that are worthy of our pursuit. In fact a merely speculative interest in knowing is morbid and misleading. The pursuit of knowledge is safest from error and most fruitful in attaining truth when it is sought for its practical use in the right conduct of human life and for the attainment of worthy ends. Never-

* Encyklopädisch-philosophisches Lexicon, article *Ursache*.

theless there is in the human constitution a persistent impulse to seek to know the realities within us and without, to account for them by finding their causes, to interpret and vindicate them to the reason by finding their accord with rational principles, laws and ends, and thus to bring them into the unity of a rational system.

§ 17. Probability.

In completing our survey of the acts and processes of knowing, we find that reasoning is not always demonstrative; that after man's utmost investigations in the legitimate use of his intellectual powers a large part of his conclusions fall short of certainty.* What must be done with the mass of probability?

I. In cases of evidence insufficient to give certainty it is natural and legitimate to give assent to the conclusion as probable in degree proportioned to the evidence. This is only saying that we assent so far as we know. So far as there is evidence we know; at the same time we are conscious of a residuum of reality in the object of thought which we do not know. Such assent is legitimate and necessary according to the constitution of the mind; it is as legitimate as the assent with irresistible certainty to a mathematical demonstration or an immediate act of consciousness.

II. When the improbability is very slight the mind disregards it and the assent is not practically different from knowledge. "Several philosophers have attempted to assign the limit of probabilities which we regard as zero. Buffon named one in ten thousand, because it is the probability; practically disregarded, that a man of fifty-six years of age will die the next day." It is impracticable to delay on so slight an improbability. If every slightest possibility of the contrary must be removed before acting, all achievement would cease and the entire action of life would resolve itself into doubting and asking questions.

III. Assent on probable evidence is reasonably and legitimately a guide of conduct. We learn from Pascal* that certain Roman Catholic writers taught that it is permitted to follow the less probable of two opinions, although conscious of being less sure of it. Mr. Gladstone quotes a "*Manuel des confesseurs*" published for the use of the French clergy of the present day, which teaches essentially the same doctrine.† This doctrine is contrary to good morals, since within the whole wide range of probability it allows a man arbitrarily to choose the opinions by which he will regulate his own conduct and which he will inculcate for the regulation of the conduct of others. It is contrary also to common sense and the natural action of the mind.

* *Les Provinciales*; Lettre V.

† *Gleanings of past years*; Miscellaneous; p. 196.

When conflicting opinions do not require immediate action it is possible and wise to suspend judgment. But when immediate action according to the one or the other is necessary, every one will act according to the opinion that seems the more probable, unless he is deficient in understanding, or is biased by some conflicting personal interest or desire which might equally lead him to act in disregard of what he knows is true.

Bishop Butler, in the Introduction to the Analogy, says, "Probability is the very guide of life. . . . A greater presumption on one side, though in the lowest degree greater, determines the question, even in matters of speculation; and, in matters of practice, will lay us under an absolute and formal obligation to act on that presumption or low probability, though it be so low as to leave the mind in very great doubt which is the truth." The same thought is expressed by Voltaire: "Almost the whole of human life revolves on probabilities. . . . Uncertainty being almost always the lot of man, we should rarely come to any determination if we waited for demonstration. Yet it is necessary to take a course of action and we must not take it at hazard. It is therefore necessary for our nature weak, blind and always liable to error, to study probabilities with as much care as we learn arithmetic and geometry."*

IV. These principles are applicable to religious belief, but with no peculiar significance; assent and action are regulated by probability here precisely as in reference to other subjects. The law of assent to probability has not been invented in the interest of religion, as many seem to imagine; it is simply a law common to every sphere of belief and action. It is a common fallacy to demand an infallible certainty in religion never required elsewhere; and to urge as valid against religious belief objections, founded on some transcendental theory of the necessity of a certainty outreaching all finite intelligence, which are instantly rejected as unworthy of notice both in physical science and practical life. Yet they are as forcible against assent and action in both of those spheres of thought as in religion. Hence devout and earnest inquirers are entangled in needless and distressing perplexity; worldly men, who every day prosecute enterprises and venture fortune and life on probabilities, excuse themselves from religious action because some questions remain unanswered and some doubts unre-moved; and skeptics, who in their own life-time have held as science successive and incompatible theories of geology, or light, or other scientific matter, are loud in objecting against religious belief because it does not give absolute certainty on all points.

* *Essai sur les probabilités en fait de justice. Oeuvres; vol. 30, p. 419.*

In a former chapter it was shown that, although the mind is fallible, it is capable of knowledge, and that the larger part of our beliefs are confirmed by the continuous experience of life. It often happens that what at first was rejected as improbable, comes by experience to be known as sustained by convincing evidence; that an opinion, acted on at first with hesitation, by its sufficiency as a guide to action vindicates itself as truth and clarifies itself into knowledge. The same is true of religious belief and of action upon it. Venturing on it at first with hesitation, it proves itself sufficient for the intellect, the heart and the conduct, it becomes interwoven with all the threads of life and into the texture of the character, and thus comes to be believed with the highest certainty and rested on with the most serene confidence. "Then shall we know if we follow on to know the Lord." What the Scripture here affirms as true of religious knowledge is an example of what is true of all knowledge. In the experience of life man advances from the doubtful to the certain, from the obscure to the clear, from the known to the knowledge of what had been unknown; and though his mind is limited and fallible and though he cannot by any intellectual gymnastics leap out of the limitations of his powers, yet by the legitimate use of his powers he is capable of knowledge and of its indefinite enlargement. But he must trustfully use his powers on their legitimate objects and trustfully act on the results, whether probability or certainty. For if he spend his strength in trying to unravel the limitations of his being, he will be entangled like a fly in a spider's web and be thenceforth capable of no action but an impotent buzzing of distress.

L

CHAPTER IV.

WHAT IS KNOWN THROUGH PRESENTATIVE OR PERCEPTIVE INTUITION.

§18. What is Known through Sense-Perception.

IN sense-perception man has knowledge of the external world. He has immediate perception of his own body and of bodies immediately affecting him through the senses.

I assume this on the principles of Natural Realism. It is unnecessary to enter into any vindication of the reality of this knowledge against phenomenologists and idealists. Comte attempted to rest physical science on phenomenism. But the students of physical science have generally abandoned his complete positivism and emphasize the reality and certainty of our knowledge of the objects of sense. They affirm the knowledge of bodies composed of infrangible atoms, and of force with its conservation, correlation and transformations.

It is unnecessary, also, because Hume demonstrated that every theory of phenomenism or subjective idealism involves the denial of all knowledge. It is idle to reopen a question then decisively settled, or to plunge again into the discussion of insoluble puzzles which were then remanded to the sphere of that transcendent skepticism which denies all knowledge because a man cannot take himself up in his own hands and examine himself, as he would an insect under a microscope.

So Mr. Mulford puts it: "Man by the senses has a direct perception of the physical world and it is a waste of thought to carry the subject through metaphysical speculation. But this does not demonstrate the certainty of the physical world to one who denies it. . . . There is no demonstration of the being of the physical world."* Our knowledge of it is not by reasoning or any reflective thought, but is by intuition. So Lord Bacon affirms that sense gives us knowledge of "natural matters," "unless a man please to go mad."†

Sense-perception, however, does not decide between speculative theories of the constitution of matter. These are irrelevant to the question. If matter consists of Boscovich's points of force, or of Dr. Hiccock's pencils of force in equilibrium, if it is a form of will-force, or a manifes-

* Republic of God, p. 96. Note.

† Distributio operis, prefixed to *Novum Organum*.

tation of thought, all its properties and powers and its objective reality remain unchanged.

It must be added that in sense-perception there is always a rational intuition, implicit or explicit in the consciousness. In sensation I become aware of the action within my consciousness of a power not my own. At the same time I know in the light of reason that this power not my own must be exerted by some other being; for it is a rational intuition that every change must have a cause. Man cannot divest himself of his reason in any act. Natural Realists recognize an implicit judgment in every perception; it is sometimes called a psychological, as distinguished from a logical judgment. What is really present is the implicit, rational intuition that the power exerted is the power of some being. In perception, so far as the intellectual act is the knowledge of a particular power present and acting here and now, we call it presentative or perceptive intuition; so far as it is the knowledge of a universal principle of reason applicable in the particular case, it is rational intuition.

But the fact that a rational intuition is present in perception does not invalidate the knowledge. Rational intuition gives knowledge as really as perceptive. And the mind is not divided; the act is one act in which the mind, constituted both perceptive and rational, knows by intuition at once perceptive and rational. So far from invalidating the knowledge, the union of the two is essential to it. Rational intuition without the perceptive intuition of an object is empty of content; perceptive intuition, without rational intuition of the form in which reason sees it, is unintelligent and falls short of knowledge.*

As to the general objection that knowledge must be wholly subjective and therefore not real knowledge, because a factor is contributed by the intellect, it is sufficient to reply as follows. If external reality and a man to know it exist, the knowledge is impossible except as the man and the reality about him act and react on each other. In human knowledge the outward reality acts on man through the senses and man reacts in sense-perception. In voluntary exertion the man acts on the outward reality and it reacts on him. In both ways he knows its existence. The objection implies that it is essential to the knowledge of outward reality that no such action and reaction take place. It implies that the mind must have knowledge of an object without coming into any relation or connection with it, without acting or reacting on it. It requires that there must be knowledge without knowing.

It is also objected that because knowledge is an intellectual act it can have no resemblance to the outward object, and that therefore we can have no knowledge of the outward object, but only of subjective im-

* "Begriffe ohne Anschauungen sind leer; Anschauungen ohne Begriffe sind blind." Kant.

pressions. This objection implies that knowledge in order to be real must be like the outward object; that in perceiving a tree there must be some image, imprint or effigy of the tree in the mind. This notion may have arisen from the analogy of outward objects impressing the sensorium, and especially of light entering the eye. But an image, or imprint, or effigy of a tree cannot enter the mind any more than the tree itself can. Nor can knowledge, which is an intellectual act, be an image or imprint of a tree. The objection is just as valid against the knowledge of impressions and phenomena as against the knowledge of the tree itself. When an object is present to the senses it awakens sensation in a way wholly mysterious to us; the mind reacts on the object in perceptive and rational intuition and knows it. The object perceived does not imprint an image; it occasions an action of intellect knowing the object. The perception has no resemblance to the object, but is its intellectual equivalent; is the conscious reacting of the mind on the object and knowing it. The sensation itself is the response in the *feelings* to the presence of the object. All objections of this kind rest on the absurdity that knowledge of outward objects is possible only if it cease to be knowledge and become identical with insensate bodies; that knowledge is possible only if divested of that which is its essence as knowledge; that knowledge is impossible if there is a mind that knows.

As to the mystery how material things can be apprehended by the mind in an intellectual equivalent, we may say at least that the Universe is itself the expression of thought and therefore can be translated back into thought. In the Absolute Reason the archetypal forms of all that is in the universe are eternal. In the finite Reason there must be, if not the archetypal forms of things, at least the capacity of constructing the intellectual equivalents of those forms which constitute real knowledge of them. In the absolute Reason the principles and laws regulative of all rational thought and action are eternal; these are the constitution of the universe, eternal in the absolute Reason. In the finite Reason there must be at least the capacity of knowing these constitutive principles and laws, as occasion for their application arises in experience in the continual action and reaction of the finite Reason and the universe. The universe in its deepest significance and reality is the expression of the archetypal thoughts of the Absolute Reason. In the finite reason there must be at least the power to translate it back into the thought which it expresses, to grasp its reality and significance in intellectual equivalents in which and in which alone its true reality and significance are known. That which is in its origin and essence the expression of thought can be apprehended in thought. We may reasonably suppose that if the universe were not originally the expression of

thought, science and all other apprehension of it in thought would be impossible. The universe and the things in it would have no intellectual equivalents.

§ 19. What is Known through Self-Consciousness.

Self-consciousness is the knowledge which the mind has of itself in its own operations.

I. The object known, the subject knowing and the knowledge are known simultaneously in one and the same act. In every act of knowing the knowledge of self as knowing is an essential element. This accords with the first law of thought, that knowledge implies a subject knowing, an object known and the knowledge. In thought the knowledge of the object is distinguishable from my knowledge of myself as knowing; but they are inseparable in fact. I perceive a stone. If my knowledge of myself perceiving is annulled the entire perception is annulled. But my knowledge of myself is not given in a separate act. All knowledge is a knowledge of two realities, the object known and the subject knowing, in one indivisible intellectual act. The knowledge of the object may be called direct intelligence, the knowledge of the subject, inverse. The mind is like the sun, which in revealing external objects necessarily reveals itself.

Sense-perception and self-consciousness are simultaneous in one act. It is like the hand which can grasp objects only as it retains its vital connection with the organism; like the electro-magnetic circuit, one force acting at two opposite poles; or like the interaction between the nervous centers and the outward object by the afferent and efferent nerves.

The same two in one is noticeable when the object of thought is itself mental. When a mental state is continuous, as a sorrow, a preference or purpose, a belief or a doubt, the mind can observe it while present, as it would observe a zoological specimen continuously present before the senses; the mind can also attend to its representations of former mental states. In these cases also the knowledge is direct of the object and inverse of the subject; and the latter is essential to the knowledge as really as in sense-perception.

This knowledge which we have of ourselves in every act of knowing is sometimes called implicit or virtual consciousness. It is the intuitive unreflective consciousness in which the mind knows all the elemental material of thought respecting itself in its own operations. It is the mind's primitive knowledge of itself not yet apprehended, discriminated and integrated in thought. It is present in all feeling and all voluntary action as well as in all knowing and thinking.

The direct intelligence or knowledge of the object is expressed in the

formula, "This is." The inverse intelligence or knowledge of the subject is expressed in the formula, "I know that this is." The former is the affirmation when the mind, intent on the object known, gives no attention to itself as knowing, as one breathes the air without noticing it. The latter is the affirmation when the mind takes notice of its own knowledge and affirms it. It affirms both the subject knowing and the knowledge; both, "It is I who know," and "I know that I know."

II. By self-consciousness we have knowledge of our own mental actions and states. We thus know what thought and knowledge, doubt, probability and certainty are; what argument, inference, generalization and other intellectual processes are; what joy and sorrow, hope and fear, desire and aversion, volition and choice are.

Comte objects that psychological knowledge founded on consciousness is impossible; because the mind in perception or thought is occupied with the object and cannot at the same time attend to its own action; and consequently the mental operations can be examined only as represented in memory. He says: "Nothing can be more absurd than the supposition of a man seeing himself think." Similar views are avowed by De Morgan, Dr. Maudsley and F. A. Lange.* Lange says: "We have already seen that Materialism is prepared, in a way forbidden to all other systems, to bring order and unity into the sensible world and is justified in treating man and all his affairs as a special case of the universal law of nature. But between man as object of empirical investigation and man as the subject having immediate knowledge of himself, an eternal gulf remains fixed. Hence the experiment forever returns whether the view of the universe derived from self-consciousness will not be more satisfactory; and so strong is the common attraction of man to this side that this experiment is a hundred times regarded as successful, though all preceding experiments of the kind are known to have failed. It will be one of the most essential steps in the progress of philosophy when this experiment is finally abandoned. But it never will be unless this impulse to find the unity of things is satisfied in some other way." He proceeds to say that a unity of the life and of the spirit may be created for the universe by poetry and imagination, though it must be excluded from the sphere of knowledge.

Few now affirm, as explicitly as Comte, the impossibility of psychological knowledge derived from self-consciousness. But it underlies the prevalent tendency to exclude from science all knowledge not derived

* Comte, *Positive Philosophy*, Martineau's Translation, p. 383. De Morgan, *Formal Logic*, chap. ii. pp. 26-28. Dr. Maudsley, *Physiology and Pathology of Mind*, chap. i. p. 9, etc. Lange, *Geschichte des Materialismus*, Vol. i. pp. 68, 69.

from the senses and is implied in the familiar sneers at psychology derived from consciousness, as only a sham, worthless for science. I appreciate the importance to psychology of knowing the physical and organic conditions of mental action and the value of the results of physiological research. But the facts which psychology seeks to know are precisely the facts known in consciousness and in no other way, which cannot be identified with the molecular motions of brain and nerve, and which from their very nature must forever elude the investigations of physiology.

In the words of J. S. Mill in reference to this objection in his criticism of Comte, "There is little need for the elaborate refutation of a fallacy respecting which the wonder is that it should impose on any one." And the wonder remains and grows, that it is still assumed in all the thinking of the day which denies the reality of any knowledge except what is derived from the senses. For it is evident that we do have knowledge of our own thoughts, feelings and volitions; that we do distinguish and describe generalization, deduction, induction and other intellectual processes; and that all physical science recognizes itself as amenable to laws of thought accordance with which is essential to correct results. It is evident also that all this knowledge of mental processes can not have been attained by attending to the representations of them in memory; for nothing can be remembered which has not been previously known. It may be noticed also that, if the fact that self-consciousness involves memory invalidates it as knowledge, then all science is invalidated; for in every experiment, observation and course of reasoning the conclusion involves the memory of the beginning and of all the steps in the process. Also, it is true that the mind can know and attend to more than one object at a time.

Besides all these errors and inconsistencies involved in Comte's objection, the knowledge which it recognizes as real is both inconceivable and unthinkable. It requires me to believe that I have knowledge of a sensible object through perception without having any knowledge that I know it, without having any knowledge of my perception or of myself as perceiving. Such knowledge is as unthinkable as a circular square; and the affirmation that it exists is mere nonsense.

Misapplied analogies have helped to give currency to this fallacy. It is said, "The eye cannot see itself." De Morgan compares self-consciousness to the inspection of a watch as it runs, by a man who cannot take it to pieces and is entirely ignorant of machinery; and adds: "I would not dissuade a student from metaphysical inquiry; on the contrary I would rather promote the desire of entering on such subjects; but I would warn him, when he tries to look down his own throat with a candle in his hand, to take care that he does not set his own head on

fire."* But the facts that an eye cannot see itself and that a man cannot look down his own throat, do not disprove a man's consciousness of his own thoughts, feelings and purposes. Nor is there any analogy between a man's looking at the movement of a machine external to himself, and his knowledge of his own thoughts, feelings and purposes.

III. By consciousness the mind has knowledge of itself in its own operations.

1. It is an error held by many, that in consciousness man knows only mental operations but not himself in those operations. The mind, it is said, is conscious of certain impressions or actions from which it infers its own existence. But this is impossible because it ascribes to thought the transcendent power of knowing by inference an elemental reality different in kind from every reality given in intuition. Or, it is said, that the mind is conscious of certain impressions and by a reflective process combines these consciousnesses into a unity which is the self. But this is impossible because the idea of an indivisible one is originated in the knowledge of self; and if not thus given in consciousness could never be known by inference; and because the unity attained would be only a unity of impressions or states of consciousness, not an individual being. In contradiction to this error, however defended, I affirm that in every mental act the knowledge of self is immediate and intuitive. In every impression or act the mind immediately and intuitively knows itself as the subject of the impression or act.

This certainly is the decisive testimony of consciousness; the consciousness that *I think* is always the consciousness, *It is I who think*. Even skeptics who deny the existence of a spirit or mind admit that this is the testimony of consciousness. Ludwig Noiré, for example, remarks that though a man is one of the most complicated of beings, he always thinks of himself as an individual and through all life identical.

The same is the decision of reason. Thought without a thinker is as impossible to reason, as motion without a body which moves and a force which moves it. Who is the *I* that is conscious of my thought but not of myself the thinker? And what does consciousness of my thought mean but consciousness of myself as thinking? The knowledge of self is implicit but essential in all knowledge. Knowledge without a mind knowing is unthinkable; and all words used to designate it are words without meaning, nugatory symbols to express what consciousness never gives; what mind cannot think, and what reason knows to be impossible.

2. Another error is that we have a greater certainty of our mental

* Formal Logic, p. 27.

operations than of the existence of self. Mr. Huxley says: "Is our knowledge of anything we know or feel more or less than a knowledge of states of consciousness? And our whole life is made up of such states. Some of these states we refer to a cause we call *self*; others to a cause or causes which may be comprehended under the title *not-self*. But neither of the existence of self nor of that of the not-self have we nor can we by any possibility have any such unquestioned and immediate certainty as we have of the states of consciousness which we consider to be their effects." They are "hypothetical assumptions which cannot be proved or known with the highest degree of certainty which is given by immediate consciousness."* But this also is contrary to the clearest testimony of consciousness; I cannot be more certain of my thought than I am that it is I who think. It is also contrary to reason; for, since thought is impossible without a thinker, I cannot be more certain of the former than of the latter.

3. There is a third error which belongs to the skepticism of Hume. He conceives of man as simply recipient of impressions. These impressions have no objective reality, ~~for~~ they are simply received in sense, while no object is perceived. He argues that we cannot infer their objectivity from memory by the identity of the representation with a presented object; for in memory we have merely impressions similar to certain previous impressions; my remembrance of a tree seen yesterday is merely an impression similar to an impression received yesterday. We cannot infer an objective reality by the principle of causation; we cannot infer that the shocks which we feel are caused by the outward objects striking us; for all that we know of cause and effect is antecedence and sequence in time. We are thus shut up in our own subjectivity, and the content of the subjectivity is merely impressions of sense, and phantoms of those impressions surviving in memory, and cohesion of those impressions which has arisen from their repeated association. Thought is merely transformed and cohering sensations. Knowledge cannot break through the conglutinated encasement of subjective impressions to any objective reality. On this theory it is impossible to have knowledge not only of other persons, but also of outward objects and even of ourselves. Hume says: "When I enter intimately into what I call *myself*, I always stumble on some particular perception or other of heat or cold, light or shade, love or hatred, pain or pleasure. I never catch *myself* at any time without a sensation and never can observe anything but the sensation." Another "may, perhaps, perceive something simple and continued which he calls himself, though I am sure there is no such principle in me. But setting aside some meta-

* Lay Sermons: Descartes, p. 359.

physicians of this kind, I may venture to affirm of the rest of mankind that they are nothing but a bundle or collection of different perceptions which succeed each other."* This position of Hume has found distinguished defenders at the present day. J. S. Mill says: "Mind is nothing but a series of our sensations (to which must now be added our internal feelings), as they actually occur, with the addition of infinite possibilities of feeling requiring for their actual realization conditions which may or may not take place, but which as possibilities are always in existence, and many of them present."† Prof. Clifford says in plainer language: "The perceiving self is reduced to the whole aggregate of feelings linked together and succeeding one another in a certain manner." "The mind is to be regarded as a stream of feelings which runs parallel to and simultaneously with a certain part of the action of the body—that is to say, that particular part of the action of the brain in which the cerebrum and the sensory tract are excited."‡ So Herbert Spencer speaks of the mind as "being composed of feelings, and the relations between feelings, and the aptitudes of feelings for entering into relations varying with their kinds."§

This error also, like the two preceding, is contrary both to consciousness and to reason. No man is conscious of himself as a series of sensations. And it is contrary to reason, for it supposes sensations existing without any subject, feelings with no one who feels; it supposes these sensations to be conscious of other sensations, these phenomena to appear with no one to whom they appear, and to be conscious of other phenomena; it supposes the sensations in a lifelong series to be severally conscious of their unity with other sensations in the series and of the continuity and identity of the series. H. Spencer speaks of feelings as combining and decomposing, cohering, agglutinating and repelling. This is an hypostasizing of sensations of a kind never surpassed by the entities and quiddities of Mediæval Scholasticism and strangely out of place in this century and especially among its scientists. And while hypostasizing sensations, it degrades the mind from its self-consciousness and makes it an indefinite composite of its own sensations.

Each of the three errors logically issues in universal skepticism, otherwise called complete Agnosticism. We see in them the contortions of intelligence in its vain endeavors to swallow itself.

4. The mind is conscious of self only in its operations by which it reveals itself in its own consciousness, not as an entity existing separate from its own intelligence, sensibility and volitions.

* Treatise of Human Nature; Book I. Part IV. Section VI.

† Examination of Hamilton; Vol. I. p. 253.

‡ Clifford's Lectures and Essays, Vol. I p. 288; Vol. II. p. 57.

§ Psychology, Vol. I. p. 193.

IV. In self-consciousness man has knowledge of himself as an individual and, in the remembrance of the past, of his own identity. By individual I mean an indivisible being, incapable of being disparted into two or more beings, and by virtue of its own indivisibility disparted from all else and incapable of being blended into or lost in anything else.

The mind conscious of itself in its own various and continuous operations is always conscious of itself as one and the same identical individual. And in whatever complex wholes it finds itself united with other beings it never loses itself in the complex whole, but is always conscious of itself in its individuality and identity.

In sense-perception the mind is also conscious of itself as distinct from the outward world, which it knows as other than itself. Thus in thought the mind is capable of identifying itself as the subject of its own operations, of differentiating itself from others, and then of comprehending itself in a complex whole in its relation to others.

Prof. Bowne suggests that the unity of the thinking subject is not given in consciousness, but it is rather a condition of all consciousness.* If he means that the knowledge of self is present implicitly or explicitly in all knowledge, it is true. But it is not exactly accurate to call it a condition of all consciousness, because it is itself an act of consciousness. The professor's argument that "consciousness does not tell us how we are made," is more witty than solid, since the question is not "How am I made?" but simply, do I know myself to be one person and the same one to-day that I was yesterday and have been during my life, or am I now or have I been during my life two or three persons or no person at all? Others explain our belief of our own existence and individuality as a rational intuition; but, since it is the knowledge of a particular fact and not of a universal principle, it does not accord with the definition of rational intuition. This knowledge is a primitive datum of consciousness, since, if it were taken away, all knowledge and thought would cease. But it is nevertheless a datum of consciousness, that is, the knowledge of it is given in consciousness. The only explanation of its origin, which is at once reasonable and accordant with the decisive testimony of consciousness itself, is that the

" Spirit that lives throughout,
" Vital in every part,"

is in all its powers and acts conscious of itself as one identical Ego. It is in this that the idea of individual being originates. Descartes (*Meditatio Tertia*) says: "of the clear and distinct ideas of corporeal things,

*Studies in Theism, p. 387.

some seem to be borrowed from the idea of myself, as substance, duration and number." M. Royer Collard says: "The Ego is the only unity which is given us immediately by nature. We do not find it by observation in anything else."* Lotze has made an extended examination of theories on this point, coming back to the conclusion that the only sufficient conception is that of one indivisible soul.†

It must be noticed that we are concerned only with the question or fact, whether I am conscious of myself always as one and the same. No one pretends that man in self-consciousness knows intuitively the answers to metaphysical questions by which men try to explain this fact; as, whether the soul is "a simple substance," or "a persistent force," or "a monad," or "the ordered unity of many elements." It is enough that I know myself as an individual being persisting in identity, the subject of various qualities and powers and of many successive acts and conditions.

V. In self-consciousness man knows himself as a rational free-agent, susceptible of rational motives and emotions, and thus knows himself as a person.

The distinctive qualities of a personal being are reason, susceptibility to rational motives and emotions, and free-will. In the exercise of rational intuition man is conscious of himself as Reason. In his interest in truth, in right, in virtue, in beauty, in worthy ends of action and in God, he is conscious of himself as the subject of rational motives and emotions. And in every free choice and volition he is conscious of himself as free-will; he knows his freedom of will in knowing himself. Dr. Mansel says truly: "The freedom of the will is so far from being, as it is generally considered, a controvertible question in philosophy, that it is the fundamental postulate without which all action and all speculation, philosophy in all its branches and human consciousness itself would be impossible."‡ Thus man knows himself as the subject of all the distinctive attributes of a person, and thereby distinguishes himself from irrational and impersonal beings. Thus in self-consciousness originates the idea of personal being as distinguished from the impersonal. We cannot have any idea of a personal being except as we find the personal in our consciousness of ourselves as rational and free beings. The elements of personality, without our consciousness of them in ourselves, would be as inconceivable as colors to a man born blind, or sounds to a man born deaf.

Our knowledge of personality is positive not negative. I do not know it merely as distinguished from the not-me; I know it positively

* Quoted Mansel *Prolegomena Logica*, p. 122.

† Mikrokosmos, B. ii. kap. 1.

‡ Metaphysics: *Encyclopedia Brit.* 8th Ed. Vol. xiv. p. 618.

as realized in myself. It is the impersonal which I define by the exclusion of the personal, the not-me by the exclusion of the me.

When I have found personality in myself I can recognize it in another. When I know myself as I, I can know another person as *Thou*; and I know him as *Thou*, and not merely as *not-me*.

When man knows personality in himself then and only then is he capable of knowing it in God. For without the knowledge of personality in himself, the question whether a personal God exists would be meaningless; it not only could not be answered, it could not even be asked; man has no knowledge of personality except as he first has known it in himself.

I have said that I have positive knowledge of personality; I know it not merely as distinguished from the not-me, but as realized in myself. Therefore I cannot concur with Lotze when he says: "Complete personality is to be found only in God; while in all finite spirits there exists only a weak imitation of personality."* Man's knowledge of his own personality arises antecedent to his knowledge of personality in God; and he knows it in himself as a real personality. In the "*I am*" of self-consciousness he declares his clear and certain knowledge of himself as a person conscious of reason, of susceptibility to rational motives and emotions, and of free self-determination. Amid the changes and evanescence of natural things he knows himself persisting the same in the strength of his personality,

"One soul against the flesh of all mankind."

§ 20. Kant's Distinction of the Ego and Cosmos as Phenomenon from the Noumenon or thing in itself.

Kant teaches that the real Ego is not the Ego known in self-consciousness, but is the Ego existing as a *Thing in itself*, out of all relation to our faculties and known only as a Noumenon or necessary idea of Reason. He affirms that the Reason demands the existence of the Ego as necessary to knowledge; but he argues that because we are conscious of ourselves only in our mental operations, all that we really attain is a synthesis of those operations, which, by a paralogism or necessary illusion of the Reason, we mistake for the Ego. The real Ego must lie beneath all our mental operations and out of all relation to our faculties as a *thing in itself*. This noumenal Ego I will call the transcendental Ego. Kant's doctrine is the same respecting the Cosmos. He says: "All our intuition is only the presentation (*Vorstellung*) of phenomena; and the things which we intuit are not in themselves as our presentation of them;" "The Ego is but the

* Mikrokosmos; Vol. iii. p. 576.

consciousness of my thought;" "We intuit ourselves only as we are internally affected by ourselves, that is, we know the Self or Ego only as phenomenon, not as it is in itself." The unity or synthesis of apperceptions which is mistaken for the Ego "is a *Thought*, not an intuition."*

I propose to show that the transcendental Ego is not a *noumenon* of the reason, but a fictitious creation for which there is no reasonable ground, and the postulating of which as the only real Ego is incompatible with the reality of knowledge. The same is true of any supposed "thing in itself" constituting the reality of material things; but for the sake of simplicity I confine the discussion to the Ego.

I. The fundamental error of Kant's system is its phenomenalism.

His "intuition of sense" which corresponds to both sense-perception and self-consciousness, is not a true intuition, but only a susceptibility of impressions; all that is given in sense is impressions. Thus he starts from the very position of Hume whose refutation was the object which he was intending to accomplish. But these impressions are disintegrated and cannot by sense be comprehended in a unity. The mind however is so constituted that it necessarily supplies the purely subjective forms of space and time, by which the impressions are brought into unity. But this unity is not sufficient for reflective thought which expresses itself in general propositions. Then the mind, which in this aspect he calls the understanding, is so constituted that it necessarily supplies the purely subjective categories of substance and quality, cause and dependence, and others; and the categorical judgments, such as mathematical axioms, the causal judgment, and others. Thus the understanding attains to unities which transcend sense. Yet the mind cannot stop with these; knowing its impressions, not only in the unities of space and time, but also in the unities of substance and cause and other categories, it traces their relations and attains the highest unities, The Ego, The World and God. The mind in this action Kant calls Reason, and these three unities he calls the ideas of Reason.

In all this Kant differs from Hume, though starting with him in phenomenalism. Hume recognizes no intellectual faculty beyond sense; man has no power to pierce the impressions of sense and to know anything beyond. Kant departs from Hume and overthrows his skepticism by demonstrating that the mind has supersensual powers, that these are essential to the possibility of knowledge, and that what the mind contributes in its own intelligence is as real as what is contributed by sense. This is a great service which Kant has rendered to philosophy.

But because he has only impressions of sense with which to start,

* Critique of Pure Reason, Transcendental Æsthetic, § 9. Transcendental Analytic, B. i. §§ 12-15, 20, 21. Transcendental Dialectic, B. ii. chap. 1.

the mind in its intellectual processes has nothing but impressions to bring into its unities of thought. Its highest attainments, the three ideas of reason, are demanded indeed by reason and essential to solve its problems and to complete the processes of thought, but remain mere ideas void of content and without objective reality. Therefore the utmost which Kant attains is that knowledge is valid for all men in the sense that all men must think so; and is objectively real so far, and only so far as the experience of sense extends. Knowledge can never pass beyond the subjective impressions; the Ego of consciousness is a mere synthesis of apperceptions, and the real Ego is a thing in itself out of all relation to our faculties.

If we correct the phenomenalism which vitiates his system at the start, if we substitute a real intuition of self and of the outward object instead of the mere susceptibility of impression which he calls sense, if, instead of splitting the mind in three and setting up an unreal antithesis of the regulative principles of thought among themselves, we recognize the one indivisible mind as endowed with the power of rational intuition, then Kant's system beginning with the knowledge of being, would go on in the knowledge of being till it culminated in the knowledge of God, the absolute being; then it would demonstrate that the power of man, according to the constituent elements of his reason, to know the universal principles and laws which regulate all thought and action is essential to the possibility of knowledge; then it would establish the fact that particular reality is known as such by presentative intuition, and known in its universal relations by rational intuition; then it would demonstrate that every particular being, having relations to the universal Reason, must have its ultimate ground and law in the universal and absolute Reason. Corrected as I have suggested, the system of Kant becomes a philosophical basis of Theism, demonstrating that not merely the idea, but the existence of God is the necessary demand of Reason, without which human Reason can never solve its necessary problems and sinks either into vacuity or hopeless contradiction, and human knowledge is unreal and impossible.

This correction Kant does not make. His system therefore stands as another exemplification of the fact that, if primitive knowledge is assumed to be of impressions only, the knowledge of being can never be attained and complete agnosticism is the necessary and only issue. Phenomenalism is a monster which gives birth to various theories of knowledge and devours them all as soon as they are born.

Kant differs from Hume in recognizing, not merely super-sensible powers, but also the existence of the "thing in itself." We know that this thing in itself is, though we do not know what it is. Thus we have real knowledge; the phenomena themselves are real as requiring in our

intellectual apprehension of them the assumption of a thing in itself, unlike the phenomena, and of which we can know only that it is. Thus what is known in human knowledge shows itself as a small island in the ocean of unknowable reality.

But on account of the phenomenalism which vitiates his system at the root, this theory of the thing in itself does not redeem his theory from agnosticism.

II. This theory involves the error that it presents the *noumenon* or the necessary idea of reason and the *phenomenon* as antithetic and reciprocally exclusive; all that is known through sense-perception, self-consciousness, rational intuition or reflective thought is phenomenon, not the true reality. Of the true reality we only know that it is, not what it is. The reason is not here recognized as revealing the rational ground, the rational principles, laws, ideals and ends of objects known in sense-perception, self-consciousness and reflective thought, and thus in harmony with and supplementing those faculties. The line of demarcation separates all that is known by the human faculties, on the one hand, as phenomenon, from the thing in itself out of all relation to our faculties, on the other hand, as *noumenon*. The two spheres are antithetic and reciprocally exclusive. Reason, therefore, giving only these noumena, effects nothing towards lifting the phenomenalism of this theory into real knowledge. So far as all that is known through human faculties is concerned, the phenomenalism remains complete; and to this extent the most thorough-going phenomenalism is involved in the doctrine of the *thing in itself*.

On the other hand, the *thing in itself*, being out of all relation to our faculties, is unknowable. Thus the final utterance of reason is that man knows that he is incapable of knowledge.

In this theory the faculties of presentative intuition and reflective thought on the one hand and of Reason on the other are set forth as giving results antithetic and reciprocally exclusive, and no way is open for bringing them into harmony as complementary and interdependent powers. Hence Kant's philosophy has issued historically in two antithetic systems of thought, each partial and erroneous. On the one hand, it issued in those wonderful creations of transcendental and false rationalism, which from it "rose like an exhalation,"

"Cloud-towers by ghostly masons wrought
In shadowy thoroughfares of thought."

On the other hand it issued in systems of phenomenalism; and at this day Kant is habitually appealed to by skeptics as having demonstrated beyond further controversy that the reason ultimately breaks down in hopeless self-contradiction and proves itself incompetent, and that therefore man's knowledge is limited to the phenomena of sense.

Kant himself did not intend that his theory of knowledge should be confounded with phenomenalism. It was the skepticism of Hume which moved him to write the *Criticism of the powers of the human mind* in order to ascertain the real conditions and scope of human knowledge. In it he has established principles subversive of phenomenalism. In the very paragraph from which one of the citations at the beginning of this discussion was taken, he says: "My own existence is certainly not mere phenomenon, much less mere illusion." And in another volume he says: "When I think, I am conscious that my Ego thinks in me and not some other being. I conclude therefore that this thinking in me does not inhere in another thing outside of me, but in myself; consequently that I am a substance, that is, that I exist by myself without being a predicate of another being."* And it is evident that if, instead of regarding the presentative intuition as giving only phenomena and the Reason as merely giving empty ideas of the Ego, the Cosmos and God as noumena or things in themselves to which consciousness can give no content, he had recognized the principles that knowledge is the intellectual equivalent of reality, that essential reality is known to us first in some particular concrete object, that reason is the power of interpreting and vindicating particular realities in the light of universal principles, laws, ideals and worth, he would have given the world a system combining the profoundest philosophy with the purest theism, and demonstrating the possibility of establishing theism on philosophical grounds.

III. In regarding the Ego of consciousness as merely phenomenal and on this ground postulating an Ego existing as a thing in itself as a necessary idea of reason, Kant misinterprets and contradicts consciousness.

As far back as memory extends I know myself as the one indivisible and identical subject of various qualities and of a continuous succession of actions. I do not know myself as a phenomenon transient always in the succession of time; on the contrary, it is only as I know myself as persisting through all changes in my individuality and identity, that I have knowledge of the succession of events; I do not float in the succession of events, but stand the one same subject of them. I do not know myself as a thought or act but as the thinker or the actor; not as mere qualities but as the subject of many qualities. The consciousness of self is knowledge of the agent in the action, of the substance in its properties, of the being in its manifestations. It reaches quite to the center of the idea of being and quite to its surface in its manifestations. This power, knowing itself in consciousness as rational, sensitive, effi-

* *Vorlesungen über die philos. Religionslehre*; Leipzig Ed. 1817: p. 80, quoted Feuerbach, *Das Wesen des Christenthums*, s. 58.

cient, free, is the Ego. Consciousness affirms it and gives no hint of any other. If consciousness is false in this testimony it is false in all; if I do not know my own existence I do not know anything.

Therefore Kant's conception of the Ego of consciousness as merely a product of thought in the synthesis of many successive apperceptions in the unity of a series is a misinterpretation and contradiction of the entire testimony of consciousness. And it is only in this misinterpretation that he finds any necessity for postulating the transcendental Ego. The transcendental Ego is a fiction created to meet an imaginary necessity founded on a mistake. So soon as we apprehend the Ego of consciousness in its true significance, no necessity of reason requires the postulating of any other; on the contrary reason forbids it as involving the cessation of intelligence. Take away from intelligence the Ego of consciousness, and nothing is left; take from the "I think" or "I exist" the *I*, and no thought and no consciousness of existence remains.

IV. The transcendental Ego is not a necessary idea of reason; it is not a *noumenon* in any true sense; reason makes no demand for it.

1. The postulating of a transcendental Ego or thing in itself is really identical with the puerile attempt to conceive of a substance or subject without qualities, as if, to use Coleridge's illustration, the substance were a pin-cushion and the qualities the pins; and as if the qualities might be pulled out like pins and the substance remain. But the power which manifests itself in qualities and acts is of the essence of the subject or substance manifested. A substance without qualities is unthinkable and a theory which implies it is unreasonable and foolish. The knowledge of pure substance without qualities is impossible because no such substance exists.

In apprehending the Ego in thought the mind must apprehend it in its two real aspects, as subject and attribute, or substance and quality; "I think," "I exist." But we do not predicate a mere phenomenon of an unthinkable substance; for if so, the conscious being itself would be a phenomenal non-being, and the subject which is postulated as its reality would be a nugatory symbol, a zero, signifying only the cessation of intelligence. The category of substance or subject and quality is only our way of apprehending the one known Ego in its two real aspects, as the individual being persisting in identity, as the subject of varied qualities and successive actions.

2. It is contrary to reason to postulate as the real Ego that which is unknown, and much more that which is known to be essentially different from the Ego of consciousness. Reason can postulate the existence of a being beyond our observation only to account for observed realities. The being postulated must possess all the potencies which account for the observed phenomena. If I postulate a

substance of qualities, it must be a substance having potencies adequate to manifest itself in these qualities. If I postulate a cause for an observed effect, the cause must be endowed with the very energies which produce the effect. If I postulate a transcendental Ego as the real being appearing in the Ego of consciousness, it must be the continuously identical person in which are active the potencies appearing in the Ego of consciousness, such as Reason, sensibility, free-will. If so, this postulated Ego is known to be a rational, conscious and free person; and thus is identical with the Ego of consciousness and there is no legitimate reason for postulating it. If, on the contrary, I say that this Ego is wholly unknowable, then all reason for postulating it ceases; for a being wholly unknowable cannot be the being that manifests or reveals itself in the Ego of consciousness.

Kant goes farther than merely to say the transcendental Ego is unknown. He positively affirms that it is not the same with the Ego of consciousness. Then we must affirm that the real Ego is not a person endowed with reason and free-will and capable of intelligence; for these are precisely the endowments of the Ego of consciousness. For the same reason we must affirm that it is not a being in any sense which has any meaning to a human mind.

3. The doctrine of the transcendental Ego assumes that the mind can create in thought an element of reality never given in intuition; this we have already seen to be impossible. The supposition is that consciousness does not give the knowledge of real being, but only of phenomena. How then is the idea of being obtained? It cannot be created by the mind in thought; it cannot be given in rational intuition. The existence of any such rational intuition Kant himself denies. Rational intuition gives the knowledge of universal principles, not of particular beings and facts. The truths which it gives enables us to infer the existence and qualities of beings never observed; but no intelligent philosopher is so rash as to affirm a transcendent power of rational intuition competent to originate the knowledge or idea of being. Therefore this theory of the thing in itself leaves no way of accounting for the existence in the mind of the idea of real being, which it so freely postulates.

So then it is Kant's own private understanding which falls into paralogisms and antinomies, and not the reason of mankind.

V. The postulating of the transcendental Ego discredits reason by making its necessary ideas fictitious, that is, ideas of no reality.

Kant teaches that there are three necessary ideas of Reason, the Ego, the Cosmos and God. These ideas the pure or speculative Reason must have; they are indispensable to complete the necessary processes of

human thought and to solve the necessary and ultimate problems of Reason. But Kant also insists that Reason knows these, its own necessary ideas, to be fictions corresponding to no known reality. In the idea of the Ego reason necessarily falls into a paralogism or illusion, mistaking the phenomenal and unreal Ego of consciousness for the true and real Ego. In developing the idea of the Cosmos reason necessarily falls into irreconcilable antinomies and contradictions. And the idea of God is an empty idea without content of reality. Thus in every one of its necessary ideas, reason finds itself false and untrustworthy. And all this results from the false antithesis of presentative and rational intuition, of phenomenon and noumenon in neither of which is real knowledge possible.

VI. The postulating of the transcendental Ego contradicts reason and involves absurdity.

It involves the absurdity inherent in all skepticism which denies the possibility of knowledge because it is relative to the faculties of the subject knowing, the absurdity that knowledge is impossible because there is a mind that knows. The postulating of a thing in itself out of relation to our faculties, as the only real being, always rests upon this flagrant absurdity.

It further involves the absurdity of presupposing a knowledge of the unknowable as the condition of knowing that knowledge through our own faculties is unreal. It is impossible to criticise my own conscious knowledge as not the knowledge of reality, unless I first have knowledge of the reality with which to compare my own knowledge. But according to the theory under consideration, the *thing in itself* is utterly unknowable. Besides, if we could know the *thing in itself*, this would be conscious knowledge through our own faculties and therefore according to the theory not a knowledge of reality.

The theory, also, involves the absurdity that a man possesses a faculty above his own reason by which he criticises his own reason and pronounces its necessary ideas unreal. A brute is irrational. For that very reason it must be utterly unconscious and ignorant of its irrationality. It would be necessary for it to have reason in order to rise above the powers which it now has and to know them as not reason. Reason is the highest power in man. Because it is the highest it can criticise the processes and results of presentative intuition, can correct the illusions of sense, can infer the unknown from the known, can interpret and vindicate to the reason all that is given in sense-perception and self-consciousness. But it cannot transcend and criticise itself; it cannot criticise its own necessary ideas by comparing them with the possible intelligence of an unknown and unknowable reason other than itself; it cannot know itself to be irrational. And precisely on this

absurdity the theory, that the thing in itself out of all relation to our faculties is the true reality, must rest. If I am told that I cannot know that two straight lines cannot inclose a space, or that every beginning or change of existence must have a cause, because there may be an intelligent being otherwise constituted who necessarily believes the contrary, I should know, to be sure, that one of us is a fool or insane, but I should know that that one is not I.

Human reason knows itself to be limited, but it cannot know itself to be irrational. It may know reason other than itself; it may know reason above itself, supreme and absolute. It must know this, because it is of its essence to know principles that are universally true, and regulative of all thought and energy. But that other reason is still known as reason like itself; that supreme reason is still known as reason in which the universal principles known to the reason of the man and of which the universe is the exponent and expression, are eternal.

When reason criticises itself, it can only criticise by its own principles. It can discover itself to be false only by discovering that its own necessary principles are contradictory to each other. But if this discovery were made it would not reveal a reason higher than our own or a reality transcending our intelligence, but rather it would reveal the fact that unreason is universal and knowledge impossible. For the only idea we can have of reason, free-will or any attribute of personality is that which we obtain from our knowledge of those attributes in ourselves. And if what we know as reason is proved by its self-contradiction to be unreason, then the very idea of reason perishes. It is a word conveying no meaning to our minds; it is utterly inconceivable and unthinkable.

It is evident, now, that the theory that knowledge is impossible because it is relative to our faculties involves the belief that the existence of an intelligent being is an absurdity; it would be obliged to know without any rational faculty of knowing.

VII. The theory of the thing in itself issues in complete agnosticism. It begins with phenomenalism; it discredits and contradicts consciousness; it gives as noumenon a fiction which is not a necessary idea of reason and is not demanded by reason; it discredits and contradicts reason and involves absurdity. Professing to give the knowledge of reality in its most profound significance it issues in universal skepticism and denies the possibility of knowledge.

In reference to the question "whether everything is not, in the last analysis, different from what we believe we know it to be," Prof. Lotze says, "there is no scientific solution." This is true in the sense that we cannot observe the thing in itself and, by comparison of what we believe

that we know with it, answer the question by the empirical method. For the same reason it is impossible for the skepticism expressed in the question to be established by empirical science. Prof. Lotze adds: "To this purposeless skepticism mankind has continually turned its back. The human reason has always had the living self-assurance that, while it cannot attain to all truth, it yet possesses in that which is necessary to its thought, not merely necessary belief, but truth likewise. It has always believed in such a rationality of the world as that thought and reality correspond to one another, and that the former enjoys a limited and not misleading access to the latter."* The considerations which I have adduced demonstrate that we may go farther than this. It is true, not only that the human reason always has had this self-assurance and that the skepticism expressed in the question can have no scientific basis, but also that reason positively knows that this skepticism contradicts reason, is absurd in itself and incompatible with the possibility of knowledge. So Dr. Dörner says: "Were we to accept Kant's doubt as to the reality of the Ego of consciousness, self-consciousness itself would crumble to pieces and all certainty about self or anything else would fall away."†

The agnostic issue of this theory of knowledge is humorously expressed by the elder Scaliger; "We have no knowledge of substances but only of their accidents. Who can define substance except in the miserable words, *something subsisting?* Evidently our knowledge is but a shadow in the sunshine. As when the stork played his practical joke on the fox, the fox could only lick the outside of the bottle, but could not touch the soup it contained, so we in perception know only the external properties, not the interior reality."‡ Thus in the irrepressible desire of knowledge implanted in us by the creator which impels us to seek it without rest, we find ourselves invited to a Barmecide feast at which we sit at a table sumptuously spread with dishes and ceremoniously go through all the courses of a stately repast, but get no food; and at which we gladly sit through the many courses in our eager pleasure at seeing the covers successively removed, revealing the emptiness of the dishes beneath them. This miserable abortion of philosophy is inevitable so long as philosophy disregards the real being that we know, and seeks for the reality of being in something deeper and more real than being itself. It is like the folly of the man who is digging to find the foundation of the earth and declares that the earth will never be stable till he discovers the tortoise on which it stands. Says F. H. Jacobi: "All our philosophizing is a striving to get behind the forms of the

* Philosophy in the last forty years; Contemporary Review, January, 1880.

† Christliche Glaubenslehre, § 7: 2.

‡ De Subtilitate, Ex. CCCVII. § 21; quoted Hamilton's Metaphysics, Lect. 8.

thing to the thing in itself; but how can we do this, since we must then get behind ourselves, behind the entire nature of things, behind their origin."* The history of philosophy has demonstrated over and over that every theory that knowledge begins as the knowledge of phenomena only, must issue in agnosticism, and that knowledge can be real only if it begins in the knowledge of being in the perceptive intuition of self and of outward things. And that this knowledge in its beginning is the knowledge of being we believe, not merely because it is necessary to the reality of knowledge, although that is a sufficient ground of belief, but because this belief is demanded and the contrary invalidated alike by consciousness, common sense and reason. Aristotle says: "The mind knows itself in the apprehension of the object known; for the mind becomes known to itself in perceiving and knowing." "It is itself known as an object of knowledge."† Augustine says: "The mind knows itself But nothing is rightly said to be while its substance is not known. Therefore when the mind knows itself, it knows its own substance."‡ Even Hegel suggested the possibility that if we could penetrate behind the scene which is open before us, we should find nothing there. I would suggest as a more correct illustration, that if a person looking through a window mistakes the landscape which he sees for a picture painted on the glass, if the window is opened that he may see the reality, he will find, not "*nothing*," but just what he was seeing before. By advancing the eye beyond the window a wider view may be obtained, but including not obliterating the first seen landscape. Of the philosophers who fall into agnosticism through this delusion I may say, in the words of Leibnitz; "They seek for that which they know, and know not that which they seek."

§ 21. The Relativity of Knowledge.

The knowledge of ourselves and our environment in presentative intuition precludes all objection to the reality of knowledge on the ground of its relativity.

I. In considering this objection it is necessary in the outset to fix the meaning of the phrase "relativity of knowledge." It is continually assumed by skeptics that all human knowledge is relative and therefore unreal; but the phrase is used with little discrimination in different meanings, and the same writer often fluctuates in seeming unconsciousness from one to another.

(a) The objection may be presented in the form that knowledge is

* Ueber das Unternehmen des Kriticismus &c. Werke, Vol. III. pp. 176, 177.

† Metaph. XII. 7. De Anima III. 4.

‡ De Trinitate, Book X. § 16.

unreal because it is knowledge only of relations. Mr. Murphy in his "Scientific Bases of Faith,"* states it in this form. But in this form it is meaningless, because a relation has no reality except as a relation between one object and another. Knowledge of a relation must be knowledge of the objects related. To speak of knowing a relation only, is to use words without meaning.

The objection may be presented in the form that we have knowledge only of beings in relation. But this affirms the knowledge of beings; and we know them in relation simply because they are in relation. We know not only the beings but also their relations. The objection would be like this: We know a husband only as related to his wife, and a wife only as related to her husband; therefore our knowledge of husband and wife is unreal; no real husband and wife exists; nothing exists but the subjective idea of the relation denoted by the word *marriage*. But it is obvious that *marriage* is without meaning except as we think of a man and a woman united in that relation. The man does not cease to be a man when he becomes a husband, nor the woman cease to be a woman when she becomes a wife. We know the two beings and the relation which they sustain to each other. This exemplifies the impotence of the objection in this form. A being does not cease to exist when it comes into relation with another being.

The objection reappears in a third form: Knowledge is relative to the faculties of the individual knowing. The object appears so to him; but because the appearance is given him through his own faculties, he has no guaranty that the object is in itself or appears to others the same as it appears to him. Lord Bacon compares the human faculties to a corrugated mirror in which objects are seen, not as they are, but distorted. Others compare the mind to a vase which gives its own shape to the water poured into it. Others say that we know through our faculties as we see through a kaleidoscope, in which bits of colored glass are seen as regular and beautiful figures in innumerable forms. That light, heat, sound and the so-called secondary properties of matter are not in our sensation what they are in the outward body has long been familiar. Successive generations of children have puzzled themselves over the teaching that there is no heat in fire. Prof. Helmholtz, in his Popular Lectures on Scientific Subjects, has discussed at length the theory of vision, with the apparent conclusion that it points inevitably to unlimited skepticism. J. S. Mill extends the argument to the primary properties of matter. The resistance of solid matter, its attraction and repulsion are only an anthropomorphic transference to the outward body of our own resistance, our own pull and push. Many insist that

*Chap. viii. p. 125.

while rational intuitions are indeed regulative of our own thinking, it is only by an illusion that we conceive of them as regulative of aught beyond our own minds. Noiré announces the somewhat amusing proposition that man's knowledge of himself in his own mental acts as a personal being is wholly anthropomorphic and illusive.* The same theory of the illusiveness of knowledge on account of its relativity is the basis of Kant's doctrine of the "thing in itself," by which, however, he does not save the reality of knowledge.

II. To the objection in this third form I make the following answers.

1. It has been already completely answered by showing that in presentative intuition man has knowledge of himself and of outward things, and in the refutation of Kant's theory of the thing in itself. I will add the following thoughts.

2. The statement of the objection always implies a knowledge of true reality and a power of comparing it with our own impressions.

Even in the objector's comparisons the knowledge of the true reality is implied. If the intellectual faculties are a kaleidoscope, what is it that looks through it and by what power does this observer discriminate between the illusions of the reflected light and the bits of glass which are the true reality? If these faculties are a mirror, what is it that sees itself in the mirror and by what power does the seer know that the mirror is corrugated and untrustworthy? So in our knowledge of the sensations of seeing and hearing, we discriminate the sensations from the outward reality to which they correspond, we ascertain that the outward reality which occasions sound consists of undulations of air and that which occasions sight consists of vibrations of an æther; we ascertain that shrill sounds correspond to rapid vibrations and grave sounds to slow vibrations; that harmonious sounds represent undulations of definite order while discords represent clashing waves; that colors represent vibrations of different rapidity; that the rapidity of the vibrations is estimated and expressed in numbers, and thus the eye presents differences in motion so minute that, though thinkable when expressed in figures, they are inconceivable in imagination. We also ascertain that the sensations are realities of consciousness; that they cannot be resolved into modes of motion nor explained by the correlation of forces; that though correspondent with the undulations and vibrations they cannot be identified with them in thought but remain, distinct in kind, realities of consciousness. Thus the science of vision and hearing implies at every step knowledge of true reality and the power of comparing it with our sensations.

* *Die welt als Entwicklung des Geistes*; pp. 55, 61.

The same is true of all phenomenalism. It is said, "We know only phenomena." But what is it that knows the phenomenon and discriminates it from the true reality? Can one phenomenon know another, and discriminate the other from itself and both from true reality? Prof. John Fiske in his *Cosmic Philosophy* affirms that what we call reality is the inevitable persistence of a fact of consciousness; that when the unknown objective order of things produces in us a subjective order of conceptions which persists in spite of every effort to change it, the subjective order is in every respect as real to us as the objective order would be if we could know it. He thinks that this is all the assurance which we need as a warrant for science and a rebutting of skepticism; and that we lose nothing in being unable to transcend the limits within which alone knowledge is possible. But his whole argument assumes a knowledge of the unknown objective order, of the fact that it produces or at least always corresponds with the subjective order, that the human mind has a power transcending the two orders, whereby it compares them and concludes that it has true scientific knowledge, whereby also it is able to judge that intellectual power transcending this would give us no more real knowledge.

In attempting to maintain the general theory of the relativity of all knowledge, the knowledge of true reality is assumed, and even the knowledge of the Absolute is implied as the ultimate datum of the reasoning. This Mr. Spencer claims to have proved in his "First Principles;" he also says, "The existence of a non-relative is unavoidably asserted in every chain of reasoning by which relativity is proved."*

3. The objection involves self-contradiction and absurdity.

It is the first law of thought that knowledge implies a subject knowing, an object known, and the knowledge as a relation between them. The objection is that because this is so, the so-called knowledge is not knowledge but an illusion.

In asserting that knowledge is unreal because it is relative to the faculties of the mind knowing, the objection asserts the absurdity that knowledge is impossible because there is a mind that knows. And it is equally valid against any mind, since any mind which has knowledge must have it through its own power of knowing. This is simply saying that an intelligent being is unthinkable; that the idea of an intelligent being involves absurdity in its very essence.

On the other hand it implies that no reality exists which is knowable or thinkable. Whatever can be conceived, or thought, or known by a mind is thereby proved not to be reality. Whereas in fact reality cannot be conceived or thought of, except as cognizable by some mind.

* *Psychology*, Vol. I., p. 209.

The objector supposes that we think of reality which is unthinkable and compare it with phenomena which are thinkable.

The objection further assumes that it is essential to the reality of a person's knowledge that he prove that things appear to all other persons, God, angels and men, precisely as they do to himself. But this is impossible, for it requires that the person not only have knowledge within his own consciousness, but also that he gather the consciousness of all other beings into his own. Besides, should the consciousness of others be revealed to this person, he could know it only through his own faculties, and therefore would attain only illusion, not real knowledge; nor would any communication with other men be possible.

4. It is evident, then, that this theory of the relativity of knowledge issues in complete agnosticism. There would be no knowledge of the secondary properties of matter; and equally there would be no knowledge of its primary properties, nor of motion, nor of the correlation of forces, nor of one's own existence, nor of any reality whatever.

"Thy hand, great Anarch, lets the curtain fall,
And universal darkness buries all."

All, then, that the objection can establish is, that our knowledge, because our minds are finite, is limited, not that it is unreal. Other beings no doubt know objects of which we at present have no conception; and Voltaire's Micromegas from the planet Jupiter with his multitudinous senses is still a possible conception; and the existence of such a being would be no objection against the reality of human knowledge.

I come back, therefore, to the principles established in Chapter II. Knowledge is known in its own self-evidence. Its reality does not depend on proof by argument and can never be invalidated by objections.

CHAPTER V.

WHAT IS KNOWN THROUGH RATIONAL INTUITION.

§ 22. Universal Principles, not Particular Realities.

IN the intuition of reason we have immediate and self-evident knowledge of universal and necessary principles. Our consciousness is not merely that they are true, but that they must be true. Thought cannot transcend them but must be regulated by them. When apprehended, in reflection they present themselves as judgments and may be formulated in propositions. The knowledge of particular realities is given in sense-perception and self-consciousness. Rational intuition does not give knowledge of these realities, but only of principles always and everywhere true of these realities. It does not give the knowledge of being, but only principles true of all beings; for example, every quality is the quality of some being. It does not give the knowledge of power and cause, but it gives the principle that every beginning or change of existence must be the effect of a cause. In the idea of absolute being, rational intuition does not give the knowledge of being, for that we know in knowing ourselves; but it gives us the principle that uncaused, absolute being must exist. It does not give the knowledge of extension in its three dimensions, but it gives the axioms of geometry and the metaphysical principles that place, considered abstractly from the body occupying it, must be continuous, immovable and unlimited. It does not give the knowledge of personal being, but gives us principles true of all persons; the principles of ethics, as that a rational being ought to obey reason; the principles of logic, as the principle of non-contradiction, "The same thing cannot be and not be at the same time," which Aristotle says is the most fundamental of all first principles.* Thus all rational intuitions are intuitive judgments which may be formulated in propositions. Lotze calls them *Grundsätze*, fundamental maxims or principles, and thus distinguishes them from *Grundbegriffe*, fundamental ideas. These principles are the unchanging and universal forms in which Reason recognizes the particular realities known in sense-perception and self-consciousness. Because it

* Metaphysics, III. 3. Πασὼν βεβαιωτάτη ἀρχήν.

is reason it cannot recognize them otherwise than in the unchanging light of reason and as related to and illuminated by its own truths, laws, ideals and ends. John Smith describes the rational intuition as "a naked intuition of eternal truth which never rises nor sets, but always stands still in its vertical and fills the whole horizon of the soul with a mild and gentle light."*

§ 23. Rise and Development in Consciousness.

I. Man is so constituted that, as his reason is developed in experience he finds himself under the necessity of thinking according to these principles and incapable of thinking the contrary. An apple-seed has constituent elements which determine from within itself the line of its development, so that, if it grows, it will grow into an apple-tree bearing blossoms and apples. So in the mind of man these principles lie as constituent elements which from within the mind itself determine its development as a reason, and are in the developed reason the norms or standards of all thought. Hence they have been fitly named by Dugald Stewart, "constituent elements of reason," and by Hamilton, "primary elements of reason." So Lotze says, they "are at bottom only the peculiar constitution of the reason itself expressed in the form of fundamental laws which regulate its action."† They are not, therefore, ideas and judgments of which we are conscious before all experience, but simply constitutional norms of thought which are developed in experience into standards of rational judgment by which it is possible to distinguish the true from the false and without which the very idea of a rational being is impossible. The mind brings nothing with it but its own constitution, but that is a constitution endowed with the elements of rationality.

II. A first principle of reason appears in consciousness only on occasion of some experience requiring its application. I must observe motion or change before I inquire what is its cause. But, as Coleridge says, "Though these principles are first revealed to us by experience, they must yet have pre-existed in order to make experience itself possible, even as the eye must exist previously to any particular act of seeing, though by sight alone can we know that we have eyes." It is only in experience that we become aware of those principles of reason which condition all experience.

III. These principles regulate thinking and action before they are recognized or enunciated in reflective thought. A savage, if asked whether two straight lines can inclose a space, or whether there can be beginning or change of existence without a cause, may declare his total

*Select Discourses, 2d Ed. Cambridge, 1673, pp. 91, 92.

† Mikrokosmos. Vol. III. B. IX. chap. iv. pp. 547, 548.

ignorance on the subject. Yet the same savage will not attempt to inclose a piece of ground for a hut with two straight poles, and if shot with an arrow will know that some one shot it. In this respect rational intuition is analogous to presentative intuition. Children and savages smell, taste, hear, see and feel and are practically guided by their perceptions before they attain in reflection the abstract idea of sensation or attempt to define and formulate it. They know their own existence before they attain the idea of the Ego. And always primitive unelaborated knowledge precedes knowledge elaborated in thought. Lotze illustrates the rational intuition latent in the constitution by comparing it to the spark in the flint. "As little as the spark shines as a spark in the flint before the steel strikes it, so little are the first principles of reason in the consciousness before all impressions in experience which are the occasion of their arising They are born in us in no other sense than that in the original constitution of the spirit is a trait which obliges it, under the excitement of experience, to build up these ways of knowing."* So Lichtenberg says: "The peasant employs all the principles of abstract philosophy, only enveloped, latent; the philosopher exhibits the pure principle."† D' Alembert expresses the opinion that metaphysics cannot teach anything that is new, but can only bring into clearer consciousness and present in the order of a system what every body knew before. Canon Kingsley says that what is needed to confound people's skepticism in philosophy and theology is "only to bring them to look their own reason in the face, and to tell them boldly, you know these things at heart already, if you will only look at what you know and clear from your own spirits the mists which your mere brain has wrapped around them."‡ Even before they are recognized and formulated they

"Are yet the fountain light of all our day,
Are yet a master light of all our seeing."

Once recognized they are

"truths that wake
To perish never."

IV. The argument against "innate ideas" as presented by Locke has no relevancy to the real doctrine of rational intuitions. Descartes explains that the ideas are natural in the sense that they do not originate from without but in the faculty of intelligence itself; and they are naturally in the intellect, not in act but only potentially; as we say that generosity is natural to some families, and certain diseases to

* Mikrokosmos: B. ii. chap. 4, Vol. i., p. 247, 248.

† Hinterlassene Schriften, Vol. ii., p. 67.

‡ Biography, p. 190.

others; not that the children suffer from the hereditary disease at or even before birth, "but only that they are born with the faculty or predisposition to contract it."* Leibnitz in his "Critique" of Locke explains that the mind is full of characters which the sense reveals but does not imprint, and compares it to a sculptor finding in a block of marble which he is chiseling veins tracing a Hercules. Prof. Sedgewick illustrates it by comparing the mind to a paper written with invisible ink: "As for knowledge his soul is one unvaried blank; yet this blank has already been touched by a celestial hand, and when plunged in the colors that surround it, takes not its tinge from accident but design and comes forth colored with a glorious pattern."† Rational intuitions are innate only in the sense that they are constituent elements of reason; that, as man becomes conscious of himself in experience, he finds himself a rational being endowed with norms and in possession of principles of reason regulating all his thinking, and constituting him able to discriminate between the true and the false, and to infer the unknown from the known. And this, rationalistic philosophers since Descartes, with more or less clearness, have apprehended and explained. Locke's argument against innate ideas was, even in his day, a striking example of *ignoratio elenchi*, or philosophical kicking at nothing; yet it has held and still holds its place with skeptics, as if the doctrine which it controverts were really believed by somebody and its refutation would prove that there is no God. A remarkable example is the chapter on "Innate Ideas" in Dr. Büchner's "Kraft und Stoff." Among the inane objections which Descartes ridicules‡ is this, that infants cannot have knowledge and ideas in the foetal condition before birth. Yet Dr. Büchner gravely urges this very objection, as if this trumpery were believed. The principles and doctrines which Dr. Büchner controverts in this chapter are not to be found in modern philosophy or theology.

§ 24. Significance as Regulative Principles.

I. Rational Intuitions are void of significance except as applied to beings and their attributes, conditions and relations known in perceptive intuition. From mere *a priori* principles nothing can be deduced. The principle that every beginning or change has a cause, is void of content until I perceive some being in the exercise of power. Then this principle extends the causal power back to the eternal. Principles known in rational intuition may be compared to the sides, and realities known in perceptive intuition to the rounds of a ladder. The sides

* Oeuvres de Descartes: Cousin's Ed., Vol. x., pp. 94, 98, 99.

† On the Studies of the University, p. 54.

‡ Vol. x., p. 107.

lying by themselves are useless for the purposes of a ladder, and so are the rounds. But when the rounds are inserted in the sides we have a ladder by which we can scale the heavens. If the reason is winged with intuitions, empirical reality is the atmosphere without which it cannot soar. Schopenhauer says, "In proportion as any cognition is *necessary*, in proportion as it brings with it what we *must* think and cannot think otherwise, it has *less reality*; and in proportion as it includes empirical accidental varieties, it has *more reality*—more of what stands on its own basis and cannot be deduced from another."* This is no invalidation of rational intuition; for it is an obscure recognition and an inadequate and misleading enunciation of the connection of rational intuition with empirical reality which I am affirming. The representation of rational intuition in Browning's Paracelsus is a caricature of the doctrine, though some Mystics have held something like it:

"There is an inmost center in us all
Where truth abides in fulness: and to know
Rather consists in opening out a way
Whence the imprisoned splendor may escape,
Than in effecting entrance for a light
Supposed to be without."

We have seen, on the contrary, that the rational intuitions exist primarily, not as formulated truths, but as constitutional norms, that they appear in consciousness only on occasion in experience and have content and significance only as applied to empirically known reality. While the impact of the outward is necessary to unlock "the imprisoned splendor," it is equally necessary that the unlocked splendor go out upon the outward or be reflected on us from it, if it is to enlighten us with knowledge. And as the splendor unlocked from its prison in a lump of coal had its origin in the sun, human reason can become luminous with intelligence only because it is itself the creature and likeness of the reason supreme and absolute in God.

II. Rational intuition does not guarantee the correctness and completeness of our observation of facts and our reflective judgments respecting them. Rational intuition gives the knowledge that two parallel straight lines can never meet; but it gives no information on the question whether two given lines are parallel and straight. Perhaps the most common and effective objection against the validity of rational intuitions is the fact that the Ancients regarded the existence of antipodes as absurd. But the ancients in this case applied the principle of causation correctly to what they, in their ignorance of gravitation and the sphericity of the earth, supposed to be the facts. According to

* Die Welt als Wille und Vorstellung, i., 145.

their view of the facts the existence of people at the antipodes would be impossible, because it would be an effect without a cause. The principle remains true and the conclusion necessary from it is correct. The mistake is as to the facts. The objection derives all its force from the misrepresentation that rational intuition gives a knowledge of the facts, which no intelligent person affirms. Such a rational intuition would approximate closely to omniscience.

Prof. Helmholtz attempts to invalidate rational intuition by supposing intelligent beings living on a solid sphere, but capable of perceiving only what is on its surface. They would know space only in two dimensions. To them a line curving with the earth's surface would be a straight line. Therefore the axioms that a straight line is the shortest distance between two points, and that between two points only one straight line can be drawn, would no longer be true. This sounds exceedingly learned and profound; but it is merely the childish objection that if some persons should mistake a curved line for a straight one, the axioms of geometry would no longer be true. If we are to reason from fancies like this it is as easy to prove one thing as another, and complete agnosticism is the necessary result. It is idle to inquire how things would appear to beings that would know themselves and all bodies merely as mathematical surfaces, having length and breadth without thickness.

III. These principles are regulative, that is they determine the possible and the impossible. I do not mean what is possible or impossible to a particular finite being; for that would be determined by the degree at which its power is limited. I mean what is possible or impossible to any and all power.

1. These principles are regulative of intellectual power; they determine what is possible and what impossible to thought. All thinking is regulated by them; for it is impossible to think the contrary of them to be true; all reasoning depends on them, and without them cannot conclude in an inference. Attempting to pass beyond them the intellect drops helpless in vacuity and fatuity. They are the primitive principles and constituent elements of rationality itself; to reject them is to strip rationality from the reason and to extinguish reason in unreason.

2. These principles determine what is possible to will-power. They are laws of things as well as of thought. The absurd cannot be real. It is impossible to think that two contradictories coexist in the same place and time. It is equally impossible for them to coexist. No will-power can cause them to coexist. If we suppose will-power annulling the law of causation and producing a change that is uncaused, the thought nullifies itself in the attempt to think it; for it is an attempt to think of an effect which is not an effect. It is equally true of all

other first principles of reason. No power of will can create, annul or change a single principle of reason or give reality to what contradicts it. Will cannot alter the sphere of reason. Power, even though almighty, is powerless upon truth. Will, even though almighty, cannot eliminate the *Must be* and the *Ought to be* from the universe.

3. These principles determine what is possible in nature. Physical science is the discovery in nature of the principles and laws of Reason pervading and regulating nature. If these principles had been in the reason of man, but not in nature, man could never have put them into nature, nor have caused nature to be regulated by them. If they had been in nature and not in the reason of man, man never could have discovered them nor formed any conception of them. And this is only recognizing from a new point of view the synthesis of phenomenon and noumenon, which, in contrast to Kant's antithesis of them, I have already shown to be essential to all rational intelligence. An intelligible object is impossible without an intelligent subject. The noumena or necessary principles and ideas of Reason are the unchanging forms in which reality is known by rational intelligence. If all that is known by man is phenomenal and not the real being, because known in relation to his mind, and the noumenon or real being is out of this relation and unknowable by man, then all that is known by any mind is phenomenal and unreal because known in relation to that mind. Thus we have the monstrous absurdity that noumena exist as pure objects out of all relation to all and every intelligent mind, that is, pure objects unintelligible to any mind and contrary to any and every principle of reason. The existence of such an object is impossible. And this impossibility is affirmed in the proposition that the principles of reason are laws of things as well as of thought; that through the reason the phenomenon is in synthesis with the noumenon. The absurd cannot be real. A reality contradictory to reason would be equally contrary to itself. Man's knowledge is limited. Realities may exist beyond the range of human observation and transcending human reason. But in the farthest range of possibility beyond the limits of human knowledge, nothing can exist which contradicts human reason, and is thus in its nature unintelligible and out of relation to any and all rational intelligence. "*Nunquam aliud natura, aliud sapientia dicit.*" *

When we say that the objects of sense-perception and self-consciousness are known in the forms of the principles of Reason, in other words, when we say that these principles are regulative of things as well as of thought, we simply affirm that these realities are known as existing in a system of things accordant with the universal truths of Reason. It is

* Juvenal, Sat. 14, 321.

often objected that we have no real knowledge of the objects of presentative intuition because we know them only in relation to one another. But they are known thus, because they exist thus. We find them in a rational system because they exist in a rational system. The denial that rational principles are regulative of these realities is the denial that the realities exist in a rational system; and this of course is the denial of the possibility of natural science, for natural science is the knowledge of nature as a system accordant with reason. Then it would follow that the universe is not grounded in reason and its constitution and ongoing are not accordant with rational truths and laws. Then there would be no difference between the reasonable and the absurd; two and two might make five; two straight lines might inclose a space; contradictions might be necessary and universal truths; the supreme law might be, "Thou shalt love thyself with all thy heart, and thyself only shalt thou serve;" and all these absurdities might be real to-day and their contraries real to-morrow, and the past might become future, and virtue be sold at a dollar a pound. And this is only saying that all basis of intelligence would disappear, the description of the universe would be nonsense and not science, and unreason would be supreme. The human mind must peremptorily reject such nonsense or sink into idiocy. It necessarily rejects it only because the rational intuitions are the constituent elements of reason, and regulate all thought. And it is only because the constitution of the universe is accordant with these principles and its ongoing regulated by them, that the universe is a Cosmos and not a chaos. They are the "*flammanitia moenia mundi*,"* the flaming bulwarks of the universe, which no power not even though almighty can break through or destroy, and within which the cosmos lies in the light of rational truth, and moves in the harmony and order of rational law to the realization of rational ideals and ends. Thus the principles of reason, together with the truths inferred from them, and the ideals and ends determined by them, are the archetypes of nature.

§ 25. Validity of Rational Intuition.

The possibility of philosophy and theology rests on the validity of rational intuition as a source of knowledge. Its vindication is, therefore, of prime importance.

I do not propose to prove these principles, each of which stands by itself, if it stands at all, in its own self-evidence; but only to vindicate their validity against objections.

I. Rational intuition is immediate self-evident knowledge, known as such in the act of knowing; as such it sustains all the criteria of primitive knowledge. It is no objection against the principles thus known

* Lucretius, *De Rerum Natura*, I. 73.

that they rest only on self-evidence and cannot be proved; for all knowledge must originate in like manner as self-evident knowledge. They, who reject them because they cannot prove them, remind us of Martin Luther's words: "When at a window I have gazed on the stars and the whole beauty of the vault of heaven, I have seen no pillars on which the builder had set the vault; yet the heavens fell not, and the vault still stands firm. Now there are simple folk who look about for such pillars and would fain feel and grasp them. But since they cannot, they quake and tremble as if the heavens would certainly fall, and for no other reason than because they cannot see and grasp the pillars. If they could but grasp them, then, they think, the heavens would stand firm enough." Truth rests on other than material supports which the senses can grasp, yet firm as the intangible forces holding fast the earth and the stars, which God *hangeeth on nothing*. We may well agree with Aristotle that they who forsake the nature of things or self-evident principles will not find any surer basis on which to build. Even those who deny their validity are compelled to rest their thinking on them. Locke, in the very chapter in which he is arguing against innate ideas, admits the validity of rational intuitions by saying: "He would be thought void of common sense, who, asked on the one side or the other side, went to give a reason why it is impossible for the same thing to be and not to be. It carries its own light and evidence with it and needs no other proof; he that understands the terms assents to it for its own sake, or else nothing will ever be able to prevail on him to do it."* The same may be said of all the first principles known in rational intuition. They severally sustain all the tests or criteria of primitive knowledge. They are self-evident. It is impossible to think the contrary as true. They persist in the practical control of thought and action in the face of all speculative objections and denials. They are consistent with each other and with all knowledge. They are therefore knowledge. And because primitive or intuitive knowledge exists independent of reflective thought, it cannot be uprooted by it. "What has never been reasoned up can never be reasoned down."

II. These principles are indispensable in all reasoning. Without them reasoning could never conclude in an inference. This has already been shown. If man is capable of an inference from premises he must have rational norms for his decision; if he is capable of bringing any investigation to a conclusion in knowledge, he must know universal principles according to which the connection and unity of particular realities known in presentative intuition can be determined. If he is capable of exploring the Cosmos and bringing it within his science he

* Essay, B. I. chap. iii. § 4.

must have a final standard of all truth. And this is as true of inductive reasoning, on which the physical sciences claim specially to rest, as it is of any other. And scientists acknowledge this practically and implicitly, if not theoretically. Some writers whose theory of knowledge leans to complete positivism use these principles while recognizing no philosophical basis for them. Prof. Bain says of the principle of the uniformity of nature which is at the basis of all induction, "Our only error is in proposing to give any reason or justification of the postulate or to treat it as otherwise than begged at the very outset." And Prof. Helmholtz says of it: "In this case but one course is available; Trust it and use it."* Says Royer Collard: "Did not reasoning rest on principles anterior to reasoning, analysis would be without end and synthesis without beginning." Says H. Spencer, criticising "pure empiricism or experimentalism": "Throughout its argument there runs the tacit assumption that there may be a philosophy in which nothing is asserted but what is proved. . . . The consequence of this refusal to recognize some fundamental unproved truth is that its fabric of conclusions is left without a base. . . . Philosophy, if it does not avowedly stand on some datum underlying reason" (i. e. reasoning) "must acknowledge that it has nothing on which to stand."† Elsewhere Mr. Spencer criticises "the metaphysicians" for giving more weight to reasoning than to the simple deliverances of consciousness; and contrasts them in this respect both with the "mass of men" and "men of science." He censures them for "a tacit assumption that the mode of intellectual action distinguished as reasoning is more trustworthy than any other mode of intellectual action."‡

III. The rational intuitions are verified in experience.

It is impossible, of course, fully to verify them in this way because experience is limited and cannot be co-ordinate with the universal. But so far as human experience extends it verifies the principles of rational intuition.

They are inherent in the common sense which regulates the action of common life; and our every-day thinking and action verify them.

They are continually verified in physical science. The principles which regulate our thinking are found to be regulative of the constitution and course of nature. Natural science is the knowledge of systemized nature. The fact-system in nature is found to be the thought-system of reason. The discovery of this system in nature and its enunciation constitute physical science. In registering the system

* "Hier gilt nur der eine Rath: vertraue und handle."

† Principles of Psychology, Vol. II. pp. 391, 392.

‡ Psychology, Part VII. chaps. ii.-iv., Vol. II. pp. 312, 317, 336.

of nature in science the mind registers in science its own trustworthiness and verifies the principles and laws of its own rationality.

This is exemplified in mathematics, which is wholly a creation of the mind. In geometry we deal only with imaginary lines and figures; in algebra we do not limit ourselves even by numbers, but use symbols equally significant of all numbers. By complicated and intricate processes we reach as the result empty forms of thought expressed in mathematical signs. Yet we find that these are the forms in which the universe is constituted and the formulas which express the laws of its action. The law of gravitation could never have been discovered by observation; it is derived from an *a priori* mathematical principle. Yet it is found to be the law which matter to the remotest star obeys. So in induction, by the help of an intuitive and universal principle we pass from the known to the unknown, from the particular to the general, immeasurably beyond the range of observation and experiment. And in hypotheses we create imaginary systems and then by observation find that the same systems have been created in the actual universe. Often, as I have elsewhere said, these anticipations of discovery have been made by students of philosophy not engaged in the scientific observation of nature, and not till years and perhaps generations afterwards has some observer, guided by the hypothesis, found it real in nature.

To evade the force of this reasoning we have been told of late that the law of gravitation is not exactly correct, though sufficiently so for our purposes, and "that we have no reason for believing that the known laws of geometry and mechanics are exactly and absolutely true at present, or that they have been approximately true for any period of time further than we have direct evidence of."* But since the law of gravitation enables astronomers to predict many phenomena of the solar system to a second and since the perturbations are in other cases so complicated as to present a mathematical problem which no human mind is competent to solve, it is more probable that the calculator has left out some element of the problem than that the law of gravitation is not correct.

This verification of rational intuition by facts is continually going on in the life of the individual and in the processes of human thought and the progress of science. It is a never ending verification of the trustworthiness of human reason and the validity of its regulative principles. Through the whole history of human thought man is always finding the universal manifested in the particular, the necessary in the contingent, the unchanging in the transitory, the rational in the natural. So the

*Prof. Clifford's Essays, i. 221, 222, 224.

ocean swells up and manifests itself in the unending succession of its waves.

IV. Rational intuition is necessary to interpret sense-perception.

Sensation reports correctly the peculiar impression of outward agents on each sense. But it is only by judgment in accordance with the principles of reason that we apprehend the reality signified by the impression on the sensorium. The senses show us the sky as a blue dome, the sun, moon and stars as moving in it, parallel rails converging as they recede; and always we resort to reason to interpret these presentations of sense and ascertain what the reality is which they bring before us. The ear gives us sound, the eye light and shade, the general sensorium heat; but it is thought, regulated by the principles of reason, which discloses the undulations which impinge on the ear and cause sound, and the molecular vibrations which cause light and heat. And it is thought, guided by the principles of reason, which carries knowledge to distances of space and time entirely beyond the observation of sense, and discovers that the facts known by sense are in the unity of a rational system.

Those who doubt the validity of rational intuition are wont to point in contrast with great satisfaction to the clearness and certainty of knowledge by sense-perception. But it is evident that without the aid of the rational intuition sense-perception could gain but a small part of our knowledge of the physical universe.

Hume has demonstrated that subjective Idealism, founded on the belief that in sense-perception we have knowledge only of impressions on the sensorium, involves universal skepticism. On the other hand Kant has demonstrated that Sense alone, without rational principles given by the mind, is equally incompetent to give real knowledge. Together they have demonstrated that both presentative intuition and rational are essential to knowledge. The mind is not passively recipient of impressions but active in knowing. The mind knows. And the postulates or principles of rational intuition belong to the very nature of knowledge. Liard, as reported by Janet, says, "As yet the Positive school has not answered the learned demonstration of Kant on the necessity of a *a priori* principles, or rather has ignored it. It has made no addition to the old empiricism which the school of Leibnitz and Kant refuted." Any system of Positivism like that of Comte, propounded as a theory of knowledge without noticing the principles established by Hume and Kant, is not entitled to the attention of scholars. Accordingly Lange says, "The very attempt to construct a philosophical theory of things exclusively on the physical sciences must in these days be described as a philosophical one-sidedness of the worst kind."*

* Geschichte des Materialismus; B. II. Sect. II. Chap. I.

I conclude, therefore, that the power of rational intuition is essential in the idea of Reason, as extension is in the idea of body. The knowledge of first principles of reason is essential to all knowledge which rises above mere impressions or phenomena, and is inherent in the nature of rational intelligence. The denial of them involves complete agnosticism. This result Fitz-James Stephen exemplifies when he says, "It is surely obvious that all physical science is only a probability, and, what is more, one which we have no means whatever of measuring. . . . The present is a mere film melting into the past."* We accept, therefore, as the most fundamental postulate, the principle that the self-evident and necessary intuitions of the mind are true. Of this postulate H. Spencer says, "Not even a reason for doubting its validity can be given without tacitly asserting its validity."†

V. It is objected that these principles are not universally believed. It is said, If they are constitutional and self-evident, every one must believe them; and this, it is said, is not the fact.

1. In sustaining this position it is usually urged that infants and savages have no knowledge of them. As thus urged the objection is founded on misapprehension of the doctrine. It is pertinent only against innate ideas, the existence of which no one affirms, not against rational intuitions existing as constitutional norms and elements of rationality, and rising in consciousness as regulative of thought only on occasion in experience.

The customary attempt to discredit the principles and laws of thought because infants and savages are not conscious of them is unscientific. It rests on the false assumption that nothing is constitutional in man except what infants and savages are conscious of; human powers are to be ascertained not by observing what they are in mature men but only what they are in their nascent state in infancy and savagery. It is an appeal from facts to fancies, from what we know to what we do not know. This kind of reasoning would prove that it is not natural to man to have a beard, or teeth, or parental affection; or that it is not natural to an apple to bear blossoms and apples because they are not observed in the seed. We do not study the acorn to find out what the oak is, but the oak to find out what the acorn is.

The objection rests on the further mistake, in respect to savages, that a principle does not regulate thought and action until it is consciously formulated. The doctrine is that men think and act under the regulation of these principles even when they have never consciously formulated them. The objection, therefore, is founded on a misapprehension of the doctrine. The validity of rational intuition, in its true meaning

* Liberty, Equality, Fraternity, pp. 346, 347.

† Psychology, Vol. II. p. 491.

is sustained by the common consciousness of mankind; and in vindicating it we avail ourselves of this ancient argument, which Hesiod states at the end of his "*Works and Days*:" "The word proclaimed by the concordant voice of mankind fails not; for it is a sort of divinity." *

2. But we are told that these beliefs are not necessary even to cultivated persons. J. S. Mill says: "Any one accustomed to abstraction and analysis, who will fairly exert his faculties for the purpose, will, when his imagination has once learned to entertain the notion, find no difficulty in conceiving that in some one of the many firmaments into which sidereal astronomy now divides the universe, events may succeed one another at random without any fixed law; nor can anything in our experience or in our mental nature constitute a sufficient, or indeed any reason for believing that this is nowhere the case."† Mr. Mill held that all necessary beliefs arise from association of ideas in the life-time of an individual. He could consistently suppose that under new conditions new associations could be formed. But here he supposes new conditions which break up the old associations without forming new ones. His supposition, therefore, is directly in contradiction to his own theory. Mr. Mill does not say that he can conceive of such a world of unreason, but only that he thinks one might learn to conceive of it.

It is very common for skeptics who hold that our knowledge is unreal because known through our own reason, to tell us of a world possibly known to other minds in which right is wrong, and the angles of a triangle may be equal to six right angles, or a hollow sphere with continuous surface may be turned inside out without rupture. But when we attend to it we see that it is a mere *Shemhamphorash* or *abracadabra*, words to conjure with, which overawe the unthinking but are seen by all thoughtful persons to be sounds without meaning. Accordingly Comte and others who exclude the very ideas of cause, force, and being from scientific thought and limit it to phenomena, yet continually think and write under the regulation of the principles which they reject. The existence of the real is unavoidably asserted in every attempt to prove that knowledge is only relative; the existence of both subject and object is asserted in every proof that we know no objective reality; the knowledge what a true cause is as distinguished from an invariable antecedent is asserted in every denial of the possibility of having knowledge of a true cause; the validity of rational intuitions is appealed to in asserting that they cannot be valid;

* Φήμη δ' ὄνποτε πάνπαν ἀπόλλυται ἢν τινα πολλοὶ
 Λαοὶ φημίζουσιν· Θεός νύ τις ἐστὶ καὶ αὐτῇ.

† Logic, B. III. Chap. 21, § 1.

the idea of God is recognized in denying the possibility of knowing him. And whatever theory of knowledge or of agnosticism prevails, men go on, alike in common life and in scientific investigation, prosecuting work, constructing institutions, enlarging science, subduing and civilizing the earth, and all in tacit accordance with the principles regulative of all thinking.

VI. Another objection is that Reason breaks down at last in irreconcilable contradictions. Though all must necessarily believe these principles yet they are contradictory to each other. We necessarily believe each of two contradictory propositions.

1. The second idea of the reason, according to Kant, is the Cosmos. In developing the cosmological ideas, there arise certain "sophistical propositions" which are necessary "in the very nature of reason," but which are "contrary" to each other. These he calls "antinomies." His four antinomies pertain solely to his second idea of Reason, the Cosmos. In the first the thesis affirms as a necessary belief that the world is limited in time and space; the antithesis affirms as equally necessary the belief that it is not thus limited but is infinite in time and space. In the second the thesis is that the world consists of simple parts; the antithesis, that no simple substance exists. In the third the thesis is that free-will exists; the antithesis, that free-will does not exist, but every thing happens necessarily under the laws of nature. In the fourth the thesis is that an Absolute Being exists; the antithesis, that Absolute Being does not exist either in the world or out of it.

The agnosticism and materialism of this day make frequent appeals to Kant's antinomies. Prof. Clifford says that in this "famous doctrine of the antinomies" Kant first set forth the opinion, "held by great numbers of the philosophers who have lived in the brightening ages of Europe," "that at the basis of the natural order there is something which we can know to be *unreasonable*."* From this doctrine of the antinomies Hamilton derives his fundamental law that "thought is possible only in the conditioned interval between unconditioned contradictory extremes or poles, each of which is altogether inconceivable, but of which . . . the one or the other is necessarily true." Accordingly he regards the causal judgment and the other first principles of reason as resulting, not from a power of positive self-evident knowledge, but from an impotence of mind to think the inconceivable and to believe the contradictory. Thus he interprets the antinomies as manifesting simply "the common principle of a limitation of our faculties. Intelligence is shown to be feeble, but not false; our nature is thus not a lie nor the

* Lecture on the Aims and Instruments of Science delivered before the members of the British Association at Brighton, Aug. 19, 1872.

author of our nature a deceiver."* The truthfulness of our nature is consistent with the antinomies rightly interpreted; but it is impossible to reach this result and thus to rescue the trustworthiness of reason and the reality of knowledge, if with Hamilton we interpret the antinomies as direct contradictories.

Mansel in his "Limits of Religious Thought" accepts the doctrine that the antinomies are contradictories and uses it in defence of religious belief. He argues that if in developing religious ideas we find ourselves necessarily involved in contradictions, the fact does not invalidate our knowledge, because in philosophy and indeed in the ultimate development of thought on any subject, reason necessarily involves us in similar contradictions. It is surprising that this defence of religious belief was welcomed with exulting applause by many theologians. It is not surprising that it was also gladly welcomed by skeptics, not as proving the reality of religious knowledge, but as disproving philosophy, and ultimately the reality of all knowledge.

Through these and similar interpretations of Kant's antinomies it has come to pass that skepticism, appealing to them, habitually assumes that philosophy in the conclusions of its greatest masters has itself acknowledged its own incompetence and demonstrated that reason, on which it claims to rest, in its ultimate principles necessarily breaks down in self-contradiction.

2. If it is a fact that reason necessarily issues in the necessary belief of contradictories, the objection is fatal. Reason is no longer trustworthy, the laws which necessarily regulate all thinking are discredited, the results of thought are disintegrated, and knowledge is volatilized into empty impressions and disappears.

It is evident, also, that this objection is the only one by which it is possible to disprove the trustworthiness of the reason or the truthfulness of its necessary intuitions. Reason cannot avail itself of any faculty more rational than itself nor lift itself to any sphere of knowledge above and beyond its own, by comparison with which to disprove its own intuitions. But if its own necessary intuitions contradict each other it can know the fact, and then must also know that some of its necessary intuitions are false and that it is itself discredited as an organ of the knowledge of truth. There is no other way conceivable by which reason can know itself untrustworthy.

And it must be noticed that even here it is the authority of reason itself to which reason appeals in judging that two contradictories cannot both be true. It is the first and most fundamental principle of reason, the law of non-contradiction, the truth of which is acknowledged

* Philosophy of Common Sense, p. 20; Philosophy of the Conditioned, pp. 500, 505, Wight's Ed. of Hamilton's Philosophy.

in judging all other principles of reason unworthy of belief. Reason therefore would necessarily trust itself in judging itself untrustworthy.

3. The antinomies rightly understood are not contradictories; the thesis and antithesis are true respectively of different realities, or they are complementary truths of the same reality, opposite poles of bi-polar truth. Reality is known under antinomies because it includes diverse beings and exists under contrasted and complementary aspects. It is easy to show in this way that Kant's antinomies are not contradictories. In the first, the thesis is true of the material universe; the antithesis is true of space and time, since these can be bounded respectively only by further space and time; and it is also true of God. In the second, the thesis expresses the consciousness of self persisting in individuality and identity; the antithesis expresses the consciousness of varied qualities and acts in which self exists and is known. The same thesis and antithesis are true of the factually infrangible atoms, if they exist. Thought is always dual; its first act is the apprehension of a being in its qualities and acts. But the existence of a being in its qualities involves no contradiction; the antinomy is only the expression of complementary truths; the two sides or aspects of one reality. In respect to the third, if we admit the existence of personal free-agents the contradiction disappears; for the thesis is true of free-agents, the antithesis, of impersonal things; or they express respecting man the complementary truths that he is at once free and dependent. In the fourth, the thesis is true of God, the antithesis of the finite universe. This antinomy is more commonly expressed as Spencer gives it: "If we admit there is something uncaused there is no reason to assume a cause for any thing;"* or conversely "Since every thing is caused, God, if he exists, must have a cause." The seeming contradiction is removed when we know that the thesis and antithesis pertain to different realities. The causal judgment is not, "Every thing must have a cause," but, "Every beginning or change of existence must have a cause;" this is true of all which begins and changes. Reason gives us, as the thesis, another necessary truth, "An Absolute, Uncaused, and all-conditioning Being must exist." These are not contradictory, but complementary truths.

In a similar manner other antinomies, urged by skeptics and agnostics to prove that reason is contradictory to itself, may be demonstrated to be no contradictions. They are commonly founded on assumed contradictions between being and its qualities or modes of existence, or between noumena and phenomena, or between the personal and the impersonal, or between freedom and dependence, or between the absolute and the finite, or between the absoluteness of God and his personality.

*First Principles, p. 37.

Kant's antinomies become contradictions because, on account of his phenomenalism, his antithesis of phenomenon and noumenon is so complete that they are reciprocally exclusive and therefore contradictory; they pertain to no common object, and the intellectual acts by which they are brought before the mind have no common intelligence as their root. The consequence is that the phenomenon is a mere subjective impression and without objective reality, and, as out of all relation to the noumenon, irrational and absurd; and the noumenon as out of all relation to the human faculties and to the phenomenon and unlike to anything which we conceive the phenomenon to be, is as truly as the phenomenon void of objective reality, and even as a subjective reality is unthinkable except as a symbol of the truism that something may exist transcending our power to know. It follows that the propositions necessarily affirmed of the one are contradictory to those necessarily affirmed of the other.

This contradiction is removed by the synthesis of the knowledge of particular beings in presentative intuition, with the knowledge of principles true of all beings in rational intuition. Then there is no longer the phenomenon known in sense and the totally different noumenon known in reason; but *being* known at once by presentative intuition in its particular reality and by rational intuition in its relation to universal truths and laws. The intuitions, whether presentative or rational, pertain to a common object and have their root in a common intelligence. The subjective and objective are no longer contradictory, but intelligence is the intellectual equivalent of reality, the objective reality accords with the subjective ideas of reason and the subjective ideas of reason are expressed in objective reality.

The antinomies are commonly explained as resulting from an attempt of the understanding, under the forms of sense, to apprehend and define the ideas of the higher reason. But this is only carrying into psychology the same divisive antithesis, as if sense, understanding and reason were shut completely apart from each other. The Kantian classification of Sense, Understanding and Reason tends to create and perpetuate this disintegration of the intellectual powers. The classification of them as Intuition, presentative and rational, Representation, and Reflection or Thought, takes up all the facts, while it emphasizes the unity of the mind in all its processes and the unity of its intelligence as having a common root and concerned with a common object.

It must be added, however, that notwithstanding Kant's sharp division of Sense, Understanding and Reason, his Reason is not the organ of rational intuitions, but only the understanding itself acting in its higher range and on its ultimate problems. There is no difference of kind between the two. He finds the rational intuitions in the

forms of sense and the categories of the understanding. It is the deficiencies and inconsistencies of his system which have made it legitimately the source of two completely incompatible systems of thought, the one Idealistic and Pantheistic, the other phenomenalistic and agnostic. At the same time the truths which he indicates, brought into harmony by correcting his inconsistencies and errors, constitute a true philosophy which is a firm foundation for Theism. His method of deducing psychological facts and metaphysical principles from forms of logic necessarily leads to error.

An antinomy, in its true meaning, may arise whenever the mind cognizes the same object by different intellectual processes and thus knows it in different aspects. The logical puzzles of Zeno are examples. In observing the motion of bodies by common sense or by physical science in the methods of concrete thought, no contradiction appears. But when we think of motion solely in the forms of logic we prove it to be impossible for a body at rest to begin to move; because it cannot begin to move while it is at rest, and cannot begin to move after it is in motion; therefore it can never begin to move. Another illustration of antinomies resulting from attaining the same truth by different methods may be found in solving geometrical problems by algebraic methods. We may reach as a result the square root of minus a which is impossible and yet has been demonstrated mathematically to be the correct result. Now if we solve the problem by geometrical methods we find the real significance of the seeming contradiction of the algebraic result to be that the line in question is produced in the opposite direction. There may be, therefore, antinomies whenever we know an object by different intellectual processes; and the antinomy may be interpreted as a contradiction until we find a synthesis of the aspect of reality known by one process with the aspect of the same reality known by the other process.

Kant's own reconciliation of the thesis and antithesis is that the one is true of the phenomenon or thing as it appears, and the other of the noumenon, or thing as it is in itself.*

This method of reconciliation is correct in principle, but on account of his separation of the phenomenon and the noumenon already indicated it is practically unavailing in the Kantian system, and the thesis and antithesis remain contradictory, and each alike fails to express real knowledge.

4. Therefore the argument from the antinomies does not prove that reason contradicts itself and is untrustworthy, but it is a demonstration of the reality of our knowledge of being, of personal being in distinction

* Critique of Pure Reason, Preface to 2d Edition.

from impersonal, and of God. If no absolute being, that is, no God, exists, then reason breaks down in contradiction and knowledge is impossible; if God, the Absolute Being, exists, reason is in harmony with itself and with all known reality. Therefore the idea of God is involved in the very essence of rationality. Rationality cannot develop itself legitimately without it, but breaks down in unreason. The same argument applies to our immediate knowledge of being and of personal being. If this knowledge is not real, the reason breaks down in contradictions and knowledge is impossible; if this knowledge of being and of personal being is real, then reason is in harmony with itself and trustworthy in all its utterances. Therefore the reality of being, of personal being and impersonal, and of absolute being, is involved in the very essence of rationality. Rationality cannot legitimately develop itself without recognizing their reality, but breaks down in unreason.

Kant himself argues that his criticism of reason shows that its ideas cannot be cognized in experience and that the laws of the finite (the causal judgment, &c.) do not cover the whole ground. If they did there could be no freedom and no God. Now, he argues, we establish something beyond experience which is thinkable. And because that something beyond experience must exist in order that experience may exist, it is real. And thus the judgments as to what is cognized in experience are in harmony with the judgments as to what transcends experience.* This demonstrates that Kant regarded his doctrine of the antinomies as a defence of the belief in freedom and in the absolute being, not as antagonistic to those doctrines. But the argument from them for the existence of free will and of God, and for the real knowledge of being and of the distinction of the personal and the impersonal, and for the complete trustworthiness of reason, becomes clear and decisive only when the antinomies are cleared from the contradictoriness and falsity brought into them by the disjunction of the phenomenon and the noumenon.

5. It has been said that Herbert Spencer's agnosticism "began with Kant." He himself avows that it is "carrying a step further the doctrine put into shape by Hamilton and Mansel." It is a legitimate outcome of the errors in one side of Kant's philosophy, and may perhaps be historically traced back to him through successive stages of thought growing out of these errors. But it differs widely from Kant's philosophy. Mr. Spencer regards as unknowable whatever is inconceivable, whether in the sense of not picturable in the imagination or not susceptible of being included in a logical concept or general notion. He says of it in the latter sense: "The first cause, the infinite, the absolute,

* Critique of Pure Reason, Preface to 2d Edition.

to be known at all must be classed. To be positively thought of, it must be thought of as such or such, as of this or that kind. . . . There cannot be more than one first cause. . . . The unconditioned, as classible neither with any form of the conditioned nor with any other unconditioned, cannot be classed at all. And to admit that it cannot be known as of such or such kind, is to admit that it is unknowable."*

In the antinomy here assumed the thesis is, We necessarily know that absolute being exists. The antithesis is, It cannot be included in a logical concept, therefore, as existent, "the absolute cannot in any manner or degree be known, in the strict sense of knowing"; it is not "even thinkable."† But the inconceivable is not the contradictory of the knowable and thinkable; the inconceivable in either of the two senses may be knowable. This I have already proved. The logical concept itself is inconceivable in the representations of imagination. And in order to know the individual it is not necessary to know it in a logical concept. The concrete individual is the unit of thought and must be known as an individual before the logical concept can be formed. The "such or such," must be known as qualities of an individual before they can be known as characteristics of a "kind" or class. The fact that there is and can be but one Absolute Being is, therefore, not incompatible with the knowledge of the Absolute Being. Mr. Spencer's reasoning here is precisely of the type of erroneous reasoning commonly charged with abundant ridicule on the mediæval scholastics, and which was the occasion of the "word-weariness," as Prof. Tyndall happily calls it, which led to the return to scientific methods; it assumes that the knowledge of the particular being depends on and is derived from the general notion or logical concept and can go no farther than its analysis; whereas in all scientific thinking it is assumed that the logical concept depends on, and is derived from the knowledge of the particular or individual being. It must be added that since, as Spencer himself implies, the absolute is known as *Being*, and so, according to the laws of thought, it must be known, if known at all, this fact brings the absolute under the general notion or concept of *being*; we distinguish being as conditioned or finite, and unconditioned or absolute. And, besides, since the Absolute Being is the supreme and absolute Reason, it is a personal being, and thus is included under the general notion of the personal as distinguished from the impersonal. The common objection that personality and unconditionateness are contradictories, that personality, if predicated of the absolute, limits it and thus annuls its absoluteness, is an example of an antinomy resolved by misapprehension into a contradiction. Precisely

* First Principles, p. 81.

† pp. 98, 46.

the same objection is equally pertinent against the affirmation that the absolute is a being. Hence if the objection is valid, the absolute is left an adjective without a substantive, a quality without a being.

And here we find in Mr. Spencer's philosophy not a legitimate antinomy but a positive contradiction. In the same sentence in which he declares "the Absolute" unknowable, he says, "yet we find that its positive existence is a necessary datum of consciousness; that so long as consciousness continues, we cannot for an instant rid it of this datum; and that thus the belief which this datum constitutes, has a higher warrant than any other whatever." This is positive contradiction. If the existence of the Absolute is a necessary datum of consciousness and the belief has a higher warrant than any other, how is the Absolute unknown and unknowable? And if it is unknowable, how do we know that it exists, that is, is a being, and that its existence is the datum of all consciousness? And the contradiction becomes still more glaring when, in the very next paragraph, he says of the Absolute that we know it as an omnipresent power, and adds, "In this consciousness of an Incomprehensible Omnipresent Power, we have just that consciousness in which religion dwells." How can that be unknowable which we know to be absolute being, and to be an incomprehensible omnipresent power, and the object of religious reverence?

6. Kant himself admits that, if knowledge begins as the knowledge of real being, it must by a necessary regress carry us to a knowledge of the absolute or unconditioned being. "If the conditioned is given, a regress in the series of all its conditions is imperatively required." "If the conditioned is given, the whole of the conditions, and consequently the absolutely unconditioned, is also given, whereby alone the former (the conditioned) was possible."* This he enunciates as a necessary principle of reason. Thus if knowledge begins as the knowledge of being, if the antagonism of phenomenon and noumenon be brought to an end by their true synthesis in the knowledge of being, then Kant's philosophy carries us irresistibly to the knowledge of the Absolute Being and becomes the firm basis of rational theism. And this Kant himself saw and acknowledged.

VII. Another objection is urged. However necessary these intuitive beliefs may be, they do not originate as the constituent elements of reason, but are the result of the association of ideas in the experience of the individual. Says J. S. Mill, "The notion that truths external to the mind may be known by intuition or consciousness independently of observation and experience is . . . in these times the great intellectual support of false doctrines and bad institutions. By the aid of

* Critique of Pure Reason, Antinomy; Section I. & Section VII.

this theory every inveterate belief and every intense feeling, the origin of which is not remembered, is enabled to dispense with the obligation of justifying itself by reason, and is erected into its own all-sufficient voucher and justification. There never was such an instrument devised for consecrating deep seated prejudices."* Accordingly in his *Logic* he asserts that all the so called principles of reason are learned by induction from repeated observations, and that the self-evidence and the impossibility of thinking the contrary are a habit resulting from continual association of ideas. In immediate connection with the passage quoted from the autobiography he tells us why, in this attempt to refute the doctrine of rational intuitions, he directs his attention chiefly to mathematics: "The chief strength of this false philosophy in morals, politics and religion lies in the appeal which it is accustomed to make to the evidence of mathematics and the cognate branches of physical science. To expel it from these is to drive it from its stronghold."

Diderot exemplifies the same type of thought. In reference to free-will and the moral intuitions he says: "What deceives us is the prodigious variety of our actions, joined to the *habit which we catch at our birth* of confounding the voluntary with the free. We have so often been praised and blamed and have so often praised and blamed others, that we contract an inveterate prejudice of believing that we and they act freely."

1. The first answer is that these principles are universal truths conditioning all rational intelligence and regulating all thought, and the knowledge of them cannot be accounted for as originating in individual experience.

By experience the objector means presentative intuition. We know by experience only what comes under our personal observation. But presentative intuition gives us the knowledge only of particulars, never of universals. The observation of all the particulars of a specified kind, improperly called perfect induction, is possible only when the particulars are few and accessible. It is impossible by personal observation to know all the particulars included under a law of nature; for example, to know by observation that every motion of every body in the universe accords with the law of gravitation.

It is equally impossible for any one by his own personal observation of particular facts to attain the knowledge of any universal principles by which he can infer the unknown from the known. It is impossible by reasoning or any other act of thought to pass from particular known objects to the knowledge of a particular unknown object without some universal principle to bridge the passage. No thinking about the ob-

* Autobiography, pp. 225, 226.

served fall of a single stone can give me any information about other bodies never observed, if the mind has no knowledge of universal principles regulating its thinking.

This was clearly shown by Descartes, who says: "What can be more absurd than to pretend that . . . by observing the motions of bodies it is possible to form in the mind the general idea that *things which are equal to a third are equal to each other*, or any similar one he pleases; for the motions of bodies are particular and the ideas are universal, having no affinity nor likeness to the motions."*

2. If it were proved that these regulating principles of thought are the result of individual experience and that the necessity of believing them results merely from the association of ideas, they would no longer be of any authority as regulative of thought and as principles of reasoning; but they would be merely inveterate prejudices of individuals.

3. Mr. Mill claims that every belief must "justify itself by reason." Accordingly he attempts to justify these principles by reason; yet all that he accomplishes in the attempt is to demonstrate, as he imagines, that these principles are merely inveterate prejudices acquired by association of ideas in the experience of the individual. Thus he logically falls into the complete agnosticism inseparable from the old theory of subjective idealism, and verifies anew the maxim that, if we must prove everything, we cannot prove anything.

4. In fact, the theory of Mr. Mill has been found entirely inadequate for the purposes of science and is now abandoned.

VIII. The objection now current assumes another form. The self-evident first principles which regulate all thought are the result of the experience of the human race transmitted by heredity in the course of its evolution, and therefore are not intuitions or constituent elements of reason. Says H. Spencer: "Those who contend that knowledge results wholly from the experiences of the individual, ignoring as they do the mental evolution which accompanies the autogenous development of the nervous system, fall into an error as great as if they were to ascribe all bodily growth and structure to exercise, forgetting the innate tendency to assume the adult form."† Within the remembrance of many now living two theories of knowledge have had currency, and have been abandoned as entirely inadequate for the purposes of physical science; the Positivism of Comte and the associational theory of the two Mills and of Bain. A third theory, founded on evolution, is now current, which still holds that our knowledge of first principles originates in experience, but substitutes for the experience of the individual the

* Oeuvres, Vol. X., p. 96.

† Psychology, Vol. I., p. 469, § 208.

experience of mankind transmitted by heredity through innumerable generations.

1. This is an admission that principles regulative of all thought are now constitutional in man, exist antecedent to every one's experience and condition it, and thus are truly *a priori* to the individual. Spencer, who claims to have originated this theory of the origin of first principles, says: "The antagonist schools of philosophy are both compelled to recognize some ultimate law of intelligence which from the beginning dominates over all conclusions; and which must be tacitly, if not avowedly, recognized before any conclusion can be accepted rather than some other. . . . A certainty greater than that which any reasoning can yield, has to be recognized at the outset of all reasoning. . . . I regard these data of intelligence as *a priori* for the individual, but *a posteriori* for that entire series of individuals of which he forms the last term."*

2. Here is also the admission that these primitive regulative principles are valid for all knowledge. They are generated by the impress of the external world on man through innumerable generations, and therefore must be true intellectual equivalents of the external world. The mind of man thus resulting from innumerable strokes of reality acting uniformly on him would be an imprint of the universe, a record of its uniform sequences and laws. Man would have become a microcosm, a copy in little of the universe; his inborn instincts and intuitions would be necessarily correlative with reality. It would be a sort of scientific revival of Plato's suggestion that our intuitions are reminiscences of a previous existence. So Chauncey Wright calls the rational intuition "a primordial memory." Murphy, in his "Scientific Bases of Faith," explains the sense of beauty on this theory; man's mind being the imprint of nature, is pleased to recognize its own thoughts and ideals in nature. Noiré calls man a microcosm, because in the course of his development he has taken up everything into himself; thought is correlative with things because generated by contact with them; he goes at length into details explaining it. He says, for example, that "the primitive cells which moved in straight lines for their food transmitted this quality to more highly organized animals; and thus a knowledge of the straight line is connatural to us." He illustrates it by the instinct by which a tiger measures the length of his spring, and the fish-hawk, notwithstanding the refraction of light in the water, measures the line of its swoop.† As the law of the conservation and correlation of force is a sort of rendering of the metaphysical law of causation in the terms of physical science, so we have here a similar

* Psychology, §§ 417, 430, 332.

† Die Welt als Entwicklung des Geistes, pp. 176, 183.

rendering of the metaphysical doctrine of rational intuition. To this extent evolutionists have come to agreement with the rationalists.

3. If the existence and validity of the principles are conceded, the question as to their origin is of minor importance. It is like an antiquarian discussion of the origin of a court whose authority no one disputes. If evolution accounts for their origin and at the same time proves that because thus originated they now have existence and validity as the necessary *a priori* conditions of all individual experience and knowledge, it is sufficient for my present purpose. The relation of evolution to other questions will be considered hereafter.

4. Evolution, however, does not satisfactorily account for the existence and validity of these principles as the necessary condition of knowledge.

In the first place, the impressions made by nature on man cannot have been continuously uniform and correct, even in respect to those realities which are recognized in the first principles. Take, for example, the principle of causation. The primitive man, by the supposition, is destitute of all principles that regulate thought. One event or combination of events is just as probable to him as another. Not having the idea of cause, when he saw a body moving, he would not ask, what made it move. The majority of movements would present no uniform sequence of antecedent and consequent. When by the exertion of his own power he had acquired the empirical idea of causation, still the majority of events would seem to him uncaused; he would have no knowledge of a cause why water runs, or winds blow, or rain, thunder and lightning appear, or the sun and stars move. He would also be the subject of many illusions. Under these conflicting impressions it would be impossible that the law of causation should become imprinted on his organism. The same is true of other first principles. And this Spencer admits, when treating another topic and apparently not thinking of its bearing on his theory of the origin of these principles, he says: "If we contemplate primitive human life as a whole we see that multiformity of sequence rather than uniformity of sequence is the notion which it tends to generate."*

In the second place, the experience of the race cannot be universal; it can never be other than the experience of many particulars. It can never give the universal principles by which we pass from what is known in experience to the knowledge of what is not known in experience.

In the third place, if in any particular nature has been continuously uniform in its impressions on the organization and so a corresponding

* Psychology, ii. pp. 528, 529., § 488.

belief has become constitutionally a law of thought, it could not have become so if the primitive man had not been endowed in his constitution with a capacity of being thus developed to rationality. All these influences have fallen as continuously and as uniformly and for a much longer time on the stones, the trees, the mollusks and the toads, without developing them to know *a priori* universal principles. There must therefore have been some factor at work in the man other than what is in the stone and in the forces of nature which have acted alike on him and on it. It is very difficult to think of the primitive man as destitute of all the constituent elements of reason which have revealed themselves in our consciousness as the universal principles which regulate all our thinking. Spencer, Carpenter and others, who ascribe the origin of these principles to the experience of man in his evolution through innumerable generations, always think anthropomorphically of the primitive man; they unconsciously ascribe to him the rational powers possessed by man now. Spencer has much to say of the cohesion of impressions or sensations. He unconsciously hypostasizes them as entities or quiddities, after the manner of mediæval scholasticism, and thus blinds himself to the meaninglessness of some of his utterances and the rationalistic implications of others. Whatever meaning or no-meaning may be in the cohesion or agglutination of sensations or impressions, it is still, according to his theory, sensations or impressions without reason or constituent elements of reason which are agglutinated; and the mere agglutination, whatever that may be, of unreason cannot produce reason. The evolution of rationality, therefore, presupposes the existence of reason, at least in its constituent elements, in the being that is evolved into reason. And this is equally true whether the evolution is in the life-time of an individual or through innumerable generations. If the action of nature on a primitive man evolves rationality in him, a rational constitution must have belonged to him as a capacity for such evolution. Otherwise something would come from nothing. There is no chemistry of thought which can dissolve the stubborn maxim of Leibnitz, that intelligence in its very essence contains a something which does not come from without, namely, the intellect itself. The distinction of subject and object goes down to the very origin of knowledge alike in the race and in the individual. There must always be the subject knowing as well as the object known, and the subject knowing must be a being constituted with the capacity of knowing. No theory of evolution can carry us beyond and posit us antecedent to this law; because it is of the essence of thought and conditions the very thinking which constructs the theory of evolution.

Scientists properly insist on verifying theory by observed facts.

They write, however, as if unconsciously they supposed the mind could in some way observe the thing in itself and compare its own knowledge with it. But in truth this verification is only the comparison of our knowledge of the object through one sense with our knowledge of it through another or through inferences from what we know in any way about it or other objects. Thus completely is the knowledge of an object the act of an intelligent subject. What sort of reasoning is it which concludes that something once existed utterly unknown now to any being, and of which we of course can form no conception, except only that it was not intelligent nor endowed with the properties and powers which constitute intelligence, and that some part of this something, acting on another part of this something, (if indeed, being utterly unknown, it could have parts or be a whole) created in the object on which it acted a rational constitution and gradually developed it to intelligence?

Therefore the evolutionist who holds with the rationalist that the regulative principles of thought are valid and are *a priori* to the individual, but that they originated in the influence of nature on man in the evolution of the race, must also admit that they existed germinal in the constitution of the primitive man and so conditioned the evolution itself. And here again he agrees with the rationalist, although he recognizes the babyhood of the race instead of the individual, and thus makes immeasurably longer the period within which the principles reveal themselves in consciousness by occasion of experience and man attains maturity.

If this reasoning is correct it is impossible to account for the origin of man's higher rational or spiritual powers by mere evolution. And the same impossibility appears from all other points of view from which we study these higher powers of man. Hence eminent scientists who favor evolution within certain limits are compelled to deny that it of itself can account for the origin of these spiritual powers.

5. But it is urged that evolution reaches back of the primitive man and that vital organisms were developed from inorganic matter. There are two objections to this:—one, that confessedly motion cannot be identified with thought; the other, that confessedly all experiments have failed to discover a single instance of such development of life. A theory can hardly be called scientific which supposes an inconceivable identification established by an utter absence of facts. But waiving this, if reason is developed primarily from the inorganic, then a rational constitution must have existed in the original matter. The necessity is the same here as in the case of the primitive man, or in the case of development by association of ideas within the experience of the individual.

6. The skeptic objects that the laws of thought are in a constant flux

in the process of evolution, and however necessary it may be to think according to them, they give no standard of truth. Noiré, in direct contradiction to his own teachings already quoted, affirms this: "Our reason thus developed is not the measure or standard of the past or future, but only the transient measure of to-day."* But this cannot be so unless nature itself changes and so makes diverse impressions on different generations; and the whole theory rests on the supposition that the impressions of nature are continuously the same. And it cannot be so, again, because if it is reason that is developed or evolved, then reason must previously have existed at least in its constituent elements in the primitive constitution of man, conditioning his development and determining its direction. Whatever is developed or evolved must have existed previously to its development. It can hardly be said that skeptics deny this. They rather ignore it, seeming to be utterly unaware that any question as to what the evolution of reason must presuppose was ever asked or needed to be asked. Skepticism, however, usually exists in the mind of the skeptic antecedent to any theory which he uses as its vehicle. Whether his theory is positivism, or the association of ideas in individuals, or evolution, each serves his purpose for the time being, and each in its turn is defended with equal confidence. The theory is not the cause but the symptom of the disease.

IX. The objection against the validity of rational intuitions recurs in another form:—Though men have these beliefs and necessarily think under their regulation, and whatever be the account given of their origin, they are, nevertheless, entirely subjective and illusive. They may be necessary beliefs to me; but to other minds the very contrary may be equally necessary beliefs. To this the following answers are pertinent and decisive:

1. This objection is merely a specific application of the theory of the relativity of knowledge, already refuted. Thus the objector can give no reasons for his belief, while there are the strongest possible reasons against it. I might here dismiss the objection. But there are some considerations pertinent to this special application of it which require attention.

2. The objection is incompatible with the theory last considered, which accounts for the rational intuitions as resulting from the experience of the race in which the impressions of nature through innumerable generations have registered themselves in the human organization, and reveal themselves to the individual in constitutional *a priori* principles intuitively known. This theory is incompatible with every form of the relativity of knowledge.

* Pp. 182, 183.

3. If the necessary beliefs regulating a man's thinking are personal beliefs or prejudices which have arisen from accidental association of ideas in his own private experience, then his knowledge consists only of impressions within his own subjectivity, while other persons, through different associations, may with equal necessity think the contrary; he has no warrant even for impressions beyond what he has himself observed; and these impressions themselves can never be united in any logical or rational unity. Real knowledge is thus impossible. This is strikingly illustrated in Protagoras, who is said to have been the first to develop philosophy, not from the object, external nature, but from the subject, man. Man, however, he regarded as having knowledge only through the senses, and his philosophy rested on the individual and particular, to the exclusion of the universal. His first principle was, "Man is the measure of all things." He meant an individual man, not the collective reason of mankind. His second principle necessarily followed, "Contradictory assertions are equally true." For since every individual is the measure of all things, the same proposition may be at the same time true to one and its contradictory true to another; and since the individual is the subject only of changing sensations, a proposition may be true to him to-day and its contradictory true of the same thing to-morrow, according to the impression it makes on him. The principles of Protagoras are carried to their logical result by Moleschott, in the *Kreislauf des Lebens*, when he says, "Except in relation to the eye into which it sends its rays, the tree has no existence. It is solely by this relation that the tree is in itself." Here is a sort of sense-idealism; the object exists only in the impression it makes on the sensorium of an observer; so soon as it ceases to be observed it ceases to exist. We have then as many universes as there are observers, and whenever a man dies or even goes to sleep, a universe is annihilated. And the same is true of every brute; for Moleschott in this connection illustrates his meaning from the rotifer and the spider, and says, "The observer may be an insect, a man, or, if there are such things, an angel." We thus exemplify the necessity of the conclusion demonstrated by Hume, that if man's knowledge is limited to the impressions made on him within his own individual experience, not only rational science but all knowledge is impossible.

4. Reason is everywhere and always the same in kind. Otherwise we must fall back into subjective idealism; knowledge cannot escape from the limits of the individual consciousness; a proposition may be necessarily true to one being and its contradictory necessarily true to another; and rational intelligence becomes impossible. Physical science itself assumes this universal sameness of reason and, if true as science, proves it. The laws which it enunciates are laws in the remotest nebula

as really as on earth. The crowded skies may contain intelligent beings widely different from us and susceptible perhaps of impressions widely different from our own; yet the laws of nature, if they have attained a scientific knowledge of them, must be the same to them as to us, else all our physical science is no better than a fairy tale; and the principles of reason must be the same to them as to us, else all our ratiocination is mere babbling; and the supreme reason must be the same to them as to us, else reason is not supreme and the ultimate ground of the universe is not reason.

Thus it is essential to the existence of rationality and to the possibility of knowledge that the universal principles of rational intuition be objectively real as the constituent elements of Reason everywhere and always the same in kind. The objection that they are only subjective and therefore illusive involves the impossibility of knowledge.

X. The validity of these principles as real knowledge involves the existence of a supreme reason in which they are essential, eternal and supreme. It is essential to the possibility of rational intelligence that the principles and norms which are constituent and essential in the reason of man, be also constituent and essential in Reason that is eternal, unchanging, supreme and universally regulative.

1. Truth has no significance except as some mind is its subject; for truth is the intellectual equivalent of reality. There can be no truth or law without a mind, as there can be no perception without a percipient and no thought without a thinker. We only delude ourselves by hypostasizing either perceptions, or thoughts, or truths, as if they were substantial beings. Truths do not float loose about the universe, independent of mind. But in the development of man's rational constitution he finds himself having knowledge of truths which are universal and regulative of all his thinking, which transcend his experience and condition all the reality which comes under his observation. There must be a supreme Reason that is the subject and source of these truths, and in that Reason they must be the eternal and archetypal principles of all that begins to be.

The universe is not abstract but concrete. Knowledge is correlative to being. Abstraction is a process of our own minds separating in thought what is never separated in fact. It is possible in thought to abstract an action from the agent, a thought from the thinker, a truth or law from the personal reason, but they cannot be separated in reality. If what we necessarily regard as universal truths and laws regulating all thought and power and thus the basis of the possibility of science, are not eternal in the Supreme Reason, then they are not universal truths and laws, but are subjective and transitory impressions in the sense-intelligence of a man, and knowledge is impossible.

2. These principles cannot be peculiar to an individual. I know that they are not mine; I have not created them; I cannot change them nor set them aside. They must be principles of a reason above and beyond me, a reason that is eternal, universal and supreme. Nor can they have originated in the evolution of the human race. If they were brought into human consciousness by the evolution of the primitive man through many generations, yet even while lying germinal and unconscious in his undeveloped constitution, they regulate man's development itself and direct it in its long progress to conscious rationality; they also regulate the corresponding development of nature in accordance with rational laws and to the realization of rational principles and ends. They cannot, therefore, have originated with man, either the individual or the race, but must have existed before the evolution began, in a reason that is universal and supreme.

3. These truths, therefore, have reality only as they are truths of Reason absolute, all-ruling, and every where and always the same. Since they are universal principles, having objective reality, originating in no finite mind, they must be eternally real in a Reason that is eternal, absolute and supreme.

4. Reason in man must be essentially the same in kind with the Reason that is supreme. For we have seen that Reason, if it is Reason at all, must be the same every where and always; and so must be the same in man and in God. The truths which regulate all thought and are law to all action must be universally true or they are never true; they must be eternal in Reason that is absolute and supreme, otherwise thought can never attain to truth nor action to righteousness.

This is a prerequisite to all communion with God. J. F. Ferrier says, "This postulation is the foundation and essence of religion. Destroy it and you destroy the possibility of religion."* For if intelligence and moral law and moral perfection and worth are to God different from what they are to man, there can be no communication between man and God; there can be no knowledge of God, no love to him, no trust in him.

This postulation is equally necessary to the possibility of knowing anything. For if there is no supreme and eternal reason essentially the same with human reason, knowledge is disintegrated into the subjective impressions of individuals, of which each individual necessarily believes his own, but which have no common standard of truth and, in different individuals, may be contradictory to one another. Therefore what are fundamental realities and ideas of reason to man, are fundamental ideas and realities to God; these at least are so, whatever, not

*Lectures on Greek Philosophy, Edinburgh, 1866, page 13; quoted Brinton, Religious Sentiment, page 97.

contradicting them, God may know which we as yet do not know. For let us make the supposition that what is universal truth to us may be absurd to God, that what is right, perfect or beautiful, what is the good that has true worth to us, is wrong, imperfect or ugly, evil or unworthy to him, or *vice versa*; then the foundation is torn from beneath the whole fabric of knowledge, and it topples down, not into any ruin conceivable by us and still under the reign of law accordant with which the fabric fell and may be rebuilt, but into a chaos in which there is no distinction between the true and the absurd, the right and the wrong, the perfect and the imperfect, the good and the evil, a chaos in which rationality would no longer exist either in man or God, and which is utterly unthinkable to every human mind. The postulation that reason is everywhere the same in kind, and is the same in man as in God, is the necessary basis of the possibility of religion, of morals and of rational intelligence.

This postulation is also involved in the very fact that man is a personal being. If there is no personal being who is the absolute and supreme Reason, then man himself is not a person. His knowledge of himself as a rational person rises clear in his self-consciousness, antecedent to his distinct apprehension of Reason above him and supreme. But his existence as a rational person is dependent and conditioned on the existence of the Absolute Reason. As his consciousness is developed and he apprehends it in thought, he finds in it the consciousness of eternal and universal truths and laws which he himself did not originate and in the knowledge of which he finds himself face to face with Reason absolute and supreme. This consciousness of self, as it is developed, reveals in its background the consciousness of God.

Lotze says: "The finite works everywhere with powers which it has not given to itself and according to laws which it has not established, and thus by means of a spiritual power which is realized not in itself alone. Hence in reflection on itself that being seems to perceive in itself a dimly discerned substance, something which is in the Ego but which is not the Ego itself, and on which as its foundation the personal development rests."*

5. Christian theism explains and confirms this postulation by the truth that man is in the image of God. This means that personality in man is essentially the same with personality in God. If so, then in knowing his own reason he knows the image of the supreme reason, God; and thus in knowing the primitive truths of rational intuition, he knows truths eternal, unchangeable and universal in God the supreme

* Mikrokosmos, Vol. iii. p. 573.

Reason. Says Frances Power Cobbe, "Our intuition is God's tuition." * Baden Powell says: "All science is but the partial reflection of the reason of man in the great, all-pervading reason of the universe. And thus the unity of science is the reflection of the unity of nature and of that unity of the supreme reason and intelligence which pervades and rules over all nature and whence our reason and science are derived."

6. Here arises the objection that in thinking that Reason in God is essentially the same in kind with Reason in man, our belief is anthropomorphic, and not real knowledge. In the face of this objection teachers of religion fear to acknowledge that man is in the image of God and that Reason is everywhere and always essentially the same, lest they should fall into anthropomorphism; to escape anthropomorphism they sometimes concede that we have no knowledge of God, but only a faith founded not in reason but in feeling; and at last find themselves forced upon the logical consequence that God is beyond the range of human intelligence and to man must ever remain unknown. They do not consider that the objection is equally fatal to all knowledge. If the knowledge of God is anthropomorphic, all science is equally so. What does the scientist find in nature but its conformity with the principles and laws of human intelligence, and what is science but the statement of this conformity? If man knows anything, his knowledge must be human knowledge; and knowledge that is human must be anthropomorphic. The objection is nothing but the doctrine of the relativity of knowledge presented in a peculiar form; it is the objection that human knowledge is not real because it is knowledge through the human faculties. This, as I have shown, is simply the absurdity that knowledge is impossible because there is a mind that knows. It is equally pertinent against knowledge by any mind, human, angelic or divine. It implies that knowledge is possible only to a being which is not endowed with reason and which knows without any power of knowing.

There must be ultimate and universal truths. If the law of the persistence of force is not true in the remotest nebula, it is not true here; if it will not be true ten or ten million years hence, it is not true now. If the principles and laws which regulate human intelligence are not true in Mars and Sirius, all our astronomy is invalidated. All truth must rest immediately or remotely on truth that is eternal. The capacity of knowing some truth that is eternal and universal, is a prerequisite for the capacity of rational intelligence. The fact that this knowledge is anthropomorphic does not prove it false; it only proves that man's knowledge has the essential characteristic of true knowledge;

* *Intuitive Morals*, p. 22.

that man's reason acts in the light of truths which eternally enlighten the Reason that is absolute and supreme.

We say, therefore, with F. H. Jacobi: "In creating man God theomorphized; therefore necessarily man anthropomorphizes. What makes man to be man, that is, the image of God, is Reason. This begins with the '*I am.*' Where this word resounds within, expressing the inmost being, there is Reason, there is Personality, there is Freedom. . . . Accordingly we confess to the conviction that man bears in him the image of God—inevitable anthropomorphism—and we affirm that without this anthropomorphism, hitherto called Theism, there is only either atheism or fetichism."*

It would be a fatally misleading anthropomorphism to ascribe to God the limitations of man, his bodily form and constitution, or the qualities of his natural life. But it is sophistry to argue from this that personality in its essence is not the same in man and in God; and the latter error is as deadly as the former.

7. To the doctrine that the principles which regulate man's thinking originate in the intuition of reason and are valid for all thinking beings, Lange objects: This "view, which is peculiar to the true original Hegelianism, leads necessarily to Pantheism; for it already presupposes as an axiom the unity of the human spirit with the spirit of the universe and with all spirits."† This has been a common error of German metaphysics. But Theism corrects it. The unity of spirits is not the pantheistic identity of substance, but the unity of persons under the universal truths and laws of one rational and moral system.

The universal reason is not submerged unconscious in nature, but energizes in the personal God, and expresses its truths, laws and ideals in the constitution of the universe. Man is constituted rational. As in contact with external nature his reason is developed, he finds in himself the principles of universal reason; he recognizes them as laws of thought and action, constructs ideals in accordance with them, and by them discriminates between good as worthy and evil as worthless. He finds them also regulating nature. He recognizes the universe as continuously expressing the archetypal thoughts of the supreme reason. Thus only can he comprehend the cosmos in the unity of a system and describe it in science. Without the theistic recognition of the supremacy of reason all science disappears, either disintegrated into individual impressions void of real knowledge, or attenuated into an abstract and unreal universal;

"Philosophy, that leaned on heaven before,
Sinks to her second cause and is no more."

* Göttlichen Dingen; Werke, Vol. iii. pp. 418, 422, 423.

† Geschichte des Materialismus, B. ii., Sect. i. chap. ii.

Thus knowing God, man by faith and love comes into a moral unity with Him and with all rational beings.

XI. The discussion proves that the intuitions of reason are real knowledge and that the only reasonable explanation of them is that they are constituent elements of Reason and reveal Reason eternal, absolute and supreme, and that Reason, everywhere and always, in God and man, is essentially the same.

In the acknowledged failure of Comte's Positivism and of Mill's theory of association, and in the evident inadequacy of the explanation of the evolutionist, the resources of empiricism are exhausted and we fall back on the Reason as the only and complete explanation. The rational intuitions exist as norms in the rational constitution of man; as his constitution is developed, they reveal themselves in consciousness on occasion in experience, as universal regulative principles; and in their revelation of man to himself as personal Reason, they reveal to him the supreme and absolute Reason as the personal God, conditioning his own personal existence, and without whom his own rational intelligence would be impossible. The discussion proves that all who would not deny the reality of all knowledge must recognize the rational intuitions as real knowledge, whatever theory of their origin may be adopted. They are regulative not only of all thinking but also in the constitution of nature. By them we are able to apprehend the Cosmos as a realm of ideas and laws, and to construct science which is its intellectual equivalent. Says Prof. John Fiske: "So long as individual experience is studied without reference to ancestral experience, the follower of Kant can always hold his ground against Locke in ethics as well as in psychology."* This admits the reality of the principles independent of the theory by which they are accounted for, and the sufficiency of the rationalistic explanations aside from the theory of ancestral experience.

The objective validity of something in the constitution of the human mind corresponding to rational intuition Hume himself seems to admit: "As nature has taught us the use of our limbs without giving us the knowledge of the muscles and nerves by which they are actuated, so she has implanted in us an instinct which carries forward the thought in a correspondent course to that which she has established among external objects, though we are ignorant of those powers and forces on which this regular course and succession depends."† We must ask, Who is the Nature that teaches us? And have we not here an unconscious acknowledgment of the supremacy and ubiquity of Reason, which our rational intuitions reveal?

*Outlines of Cosmic Philosophy, Vol. ii. p. 326.

† Inquiry Concerning the Human Understanding, sect. II., sub *finem*.

Mr. Frederick Harrison says man is "the being which is the real discoverer and author of law. . . . Laws of nature are not so much the expression of absolute realities in the nature of things (of this we know nothing absolutely), but they are those relations which the human intellect has perceived in co-ordinate phenomena of all kinds. . . . The whole sphere of law is nothing but the outcome of the human intelligence applied to the world of phenomena."* But "the great Human Being," in whose "Human Providence" Mr. Harrison finds "both law and author and minister of law," certainly did not of its own mind and will arrange nature according to these laws; on the contrary, it finds the world arranged according to them. This, positivists like Mr. Harrison would be obliged to admit. Then, we necessarily ask, how came the world to be arranged according to these laws, and how came the Human Being to know them? The Positivist arbitrarily rules this question out as illegitimate. Yet it is a question which man has always asked; and the recognition of a cause beyond man is as necessary in "the great Human Being," and has been historically as constant and universal, as the laws which Mr. Harrison so freely recognizes. If the laws which man finds in the world have no objective reality, then it must be equally true that the world has no objective reality. Then human knowledge ceases, and "the great Human Being," forever cheating itself with illusions, is not the Being on whom man can rest in peace as the supreme object of trust and worship. And again we see that if man has any real knowledge, the principles and laws which are regulative alike of nature and of his own thought, must be principles and laws in an absolute Reason, the ultimate ground alike of nature with its laws and of man with his rational intelligence, and that Reason everywhere and always, in God and man, is the same.

XII. The possibility of science, and indeed of any knowledge, more than the sense of isolated impressions on a sensorium, rests on the following realities:—

Through rational intuition man has real knowledge of universal, regulative principles, and in knowing them has knowledge of himself as Reason.

Supreme in the Universe is Reason essentially like our own, and, however transcending, never contradicting the Reason of man; and Reason is everywhere and always the same.

The principles of Reason are universally regulative of thought and efficient power, in the sense that the absurd can never be made real.

These realities are the conditions of the possibility of science. Because man is Reason, and because the universe is accordant with

* The Creeds Old and New, Nineteenth Century, November, 1880.

rational principles and laws and progressively realizes rational ideals and good, and because it thus expresses the archetypal thoughts of the supreme Reason, it can be apprehended and systemized in science by the rational intelligence of man.

XIII. Atheism must rest on some theory which logically involves the impossibility of knowledge. This is a necessary inference from the positions already established. It is also verified by the history of all atheism which attempts to vindicate itself to rational intelligence. If it is impossible to know God, it is impossible to know anything scientifically in the unity of a rational system.

CHAPTER VI.

THE ULTIMATE REALITIES OF HUMAN KNOWLEDGE.

§ 26. Definition.

By ultimate realities I mean the ultimate kinds or genera of reality which are known in intuition and designated by a common name, and are the objects of human thought. It is conceivable that all the elemental realities known in intuition may be ascertained and named. If this should be done we should have before us and know by name all the ultimate genera or kinds of reality of which it is possible to have knowledge. We may call them for short the ultimate or fundamental realities, and our ideas of them the ultimate or fundamental ideas of knowledge.

Aristotle attempted a classification of the ultimate genera of reality, and called them Categories. Kant, however, has used this word to denote the Root-notions (*Stammbegriffe*) of the understanding, the pure forms of thought given by the mind itself. Since his day the word has retained the meaning in which Kant used it. Some other word, therefore, must be used to denote the ultimate genera of reality.

§ 27. Matter and Form.

Kant calls the particular reality known in perceptive intuition the "matter" of thought or knowledge; the rational truths and laws which declare its relation to the universal, and which are known in rational intuition, he called the "forms" of knowledge or thought. It has been objected that the latter, as "forms of thought," can have no objective reality; and it has come to pass that any use of the terms *matter* and *forms* of thought at once awakens the suspicion that the writer using them denies the reality of knowledge. But in their true significance they carry in them no suggestion of the unreality of knowledge. The "matter" of knowledge is the particular realities known in presentative intuition; its "form" is the truth and laws which express their relation to the universal. Sense-perception and self-consciousness know a particular being in its particular modes of existence. Reason knows the same in its relations to the universal. The "matter" of my knowledge of power is power as I know it in some particular exertion of it; its

"form" is the rational principle that every beginning or change of existence must have a cause. The "matter" of my knowledge of space is extension in its three dimensions; its "form," in which Reason knows it, is the metaphysical principle that space is continuous, immovable within itself and unlimited, and the mathematical principles of geometry.

When this true conception has been attained, the controversy about the "matter" and "form" of knowledge passes away, and with it the doubt which it has thrown on the reality of knowledge. The necessary forms of thought are also the forms of things. They are forms of things because originally and eternally they are archetypal in the supreme Reason.

Plato's "ideas" were at once conceptions of the mind and forms or archetypes of things. When we grasp the fact that in intuition we have positive knowledge of self and external being and of universal principles of reason, we necessarily come to the Platonic position that the necessary forms of thought are the forms of things; we grasp in its true significance the principle which has given to Platonism its perennial life, that the truths of reason are at once the laws of thought and the archetypal norms of all existence.

It is the error of Kant that space and time, which he calls forms of sense, and reality, substance, cause, existence and other categories of the understanding, are pure subjective forms of thought, which the mind must necessarily put under phenomena in apprehending them. But we now see that the necessary forms of thought are simply the universal norms or principles of reason; and that these must be the norms or principles regulative not of thought only, but of all existence; because, if not so, reason is false in its constituent elements; what we have taken for reason, the organ of truth, is found to be unreason and an organ of falsehood; and rationality and knowledge are no more.

We return now to the true position. Perceptive intuition is the knowledge of some particular being in some particular mode of existence. Rational intuition is the knowledge of the rational norms of all existence. By reason we know the particular reality as related to truth that is universal, necessary and unchanging, and through this to Reason unconditioned and supreme.

§ 28. Classification.

The Ultimate Realities are of two classes, distinguished by their origin; each of these classes must be subdivided into two:—

Class I. Ultimate Realities primarily known in Presentative Intuition:

1. Being.
2. Modes of the Existence of Being.

Class II. Ultimate Realities primarily known in Rational Intuition :

1. Norms or Standards of Reason:—The True, The Right, The Perfect and The Good; or Truth, Law, Perfection and Good.

2. The Absolute.

I mean by "the good" that which Reason estimates by its standards of Truth, Right and Perfection, as having worth, or as worthy of the pursuit, possession and enjoyment of a rational being.

The Absolute is the unconditioned and all-conditioning Being, on which finite beings in all the modes of their existence depend, and in which the norms or standards of Reason are eternal. The intuition of Reason that Absolute being must exist, is a truth. As such it belongs with the True, and is, like every other necessary truth, a law of thought and a norm or standard of judgment. But this intuition opens to us the knowledge of the Absolute or Unconditioned. This properly stands by itself in the classification as the last of all the ultimate realities.

Aristotle classifies the genera of reality in ten categories; Being, Quantity, Quality, Relation, Place, Time, Position, Possession, Action, Passion.* This is evidently incomplete; and the same may be said of all attempts to complete it. But it was begun on the right principle. His categories are not logical predicates of general notions, but realities of concrete being. The ultimate realities are not found by the methods of abstract thought and formal logic, but by those of concrete or realistic thought attending to concrete beings. Kant, on the contrary, develops his categories from the twelve logical functions of possible judgments, and proceeds throughout to logical products rather than to concrete realities. The result is a grand system of what thought must be, empty of all content of known being.

I do not claim that the classification which I present is complete and open to no objection. I present it only as a classification which I have found helpful to use in attempting to set forth the reality, extent and limitations of human knowledge.

It will be noticed that, according to this classification, knowledge begins as knowledge of particular beings in their several modes of existence, proceeds to the knowledge of them in their relations to the universal principles of reason, and issues in the knowledge of absolute being; this is the order of knowing and thinking. On the other hand, in the order of dependence, the Absolute Being is first, as the ultimate ground of the existence of all particular beings and of the possibility of their unity as a universe. In the Absolute Being all truth, law, perfection and worth are archetypal and eternal, and of these the universe of finite things is the ever progressive expression and realization.

* Ὀνσία, ποσόν, ποιόν, πρὸς τι, πῶν, ποτέ, κείσθαι, ἔχειν, ποιῆν, πάσχειν. *Topica* I. 9. *Organon* I. Κατηγορίαι.

CHAPTER VII.

ULTIMATE REALITIES PRIMARILY KNOWN IN PERCEPTIVE OR PRESENTATIVE INTUITION: BEING AND ITS MODES OF EXISTENCE.

§ 29. Being.

I. *Being* is known immediately in presentative intuition and can be defined or described only by referring every man to his own consciousness of it.

A man knows *being* in his consciousness of himself as existing. The whole idea of *being* is given in that consciousness. To say *I think*, is the same as to say, *It is I who think*. *I think, I act, I feel*, every affirmation which a man can make of himself carries in it the affirmation, *I am*; and, without the *I am*, it is void of all significance and reality. It is here that he has the knowledge of being.

We also have knowledge of being in sense-perception. In one and the same act I know the outward object and myself. And of each I have positive knowledge. I know myself not as a mere negation of the outward object but as positively known being; in this positive knowledge I affirm, *I am*. I know my own being in all its fullness of life, intelligence and power. I know the outward object, not merely negatively as not-me, but positively; my own body posited in and occupying space, and other bodies impinging on my organism or resisting my energy.

Because being is known intuitively it cannot be defined, but can be known only in one's own consciousness of it. We know that a thought, an action, a feeling, a motion is not a being. It is impossible to think these as beings. We refer the thought to a thinker, the action to an agent, the feeling and the motion to a being that feels and moves. But we cannot define what a being is; we know what it is in the consciousness of self and the perception of bodies.

Having attained in perceptive intuition the idea of being, we group together all realities known as beings, whether persons or things, in one class and call them *beings*. And this is the first of the ultimate realities known in perceptive intuition.

II. Being, as known in perceptive intuition, is a particular or determinate being existing in particular properties or attributes.

Being *ex-ists* (*ex-sisto*); it stands out in view. It exists or stands out to our knowledge in various qualities or powers; also as one or many; as occupying space or persisting in time; as under limitation; and as in relation. These may be called attributes of being as known in perceptive intuition; and, since in these the being *ex-ists*, they may be called modes of existence.

III. Being, known by perceptive intuition as existing in various modes, is known by the Reason in rational intuition in the "forms" of its universal principles and laws and in accordance with its unchanging standards or norms.

We know by rational intuition that every quality, attribute or phenomenon is a quality, attribute or phenomenon of a being. There can be no thought without a thinker, no action without an agent, no motion without something that moves, no beginning or change without a cause, no phenomenon without a being that appears in it as well as a being to whom it appears, no truth without a mind to know it.

Conversely, we know by rational intuition that every being exists in some attributes or properties. And this is only saying that every being *ex-ists*. There can be no being without attributes; there can be no being without power of some kind; and this is only saying there cannot be a being that does not exist. If we attempt to think of Being without attributes, a substance stripped of all properties, we have nothing left. Not only is nothing left, but our thought issues in the contradiction that Being is the same with Nothing. And this is the "Thing in itself" out of all relation to our faculties. It is not an unknowable which we may some time come to know; it is not Nothing, as the mere denial of being; it is the symbol of a hopeless contradiction at the root of all knowledge.

Thus we know being in its deepest reality and significance. While perceptive intuition gives us particular beings existing in particular modes, rational intuition shows us that this being is real being as Reason knows it in its relations to the universal. Thought cannot pass behind this to think of anything more real. Beyond being, as presentative and rational intuition know it, is nullity, into which thought cannot enter nor intuition glance.

IV. Being, in its whole reality as substance and quality, agent and action, is presented in presentative intuition. The reality presented in intuition we apprehend in thought as substance and quality, agent and action; but the reality thus apprehended is given in the intuition. It is so apprehended in thought because it is so in reality. Rational intuition adds that being, thus known, is real being, as reason in the light of

its universal principles knows it must be. Substance and quality, therefore, is not, as Kant regards it, a form of pure thought wholly subjective to the thinker, but it is objectively real in the being as known in presentative intuition, and is so apprehended in thought both because it is so in the particular being known, and because Reason sees that it must be so in all beings.

This is accordant with the earlier Greek philosophy, which did not use *ὁποκείμενον* (substance), but *οὐσία*, to denote Being; as if we had the abstract word *Beingness*. The same usage we find centuries later in Augustine: "It is called *Essence*, as derived from *Esse*, and denoting that which is; and it is also called *substance*, as derived from *subsisto*, with the same meaning."* Essence is the Latin etymologically corresponding with the Greek *οὐσία*, and might legitimately be used with the same meaning, were it not appropriated in logic to a different use and with a different meaning.

The ancient Greeks debated whether everything is in constant flux and transition, or whether under all changes something stands. In self-consciousness I know myself as the subject of many qualities and many successive acts, yet myself under all the changes persisting the same. The same is known in every being; under diverse qualities and successive acts the being stands the same. To denote the being thus standing the same under many qualities and successive changes, we call it *substance*; that which subsists or stands the same under all diverse qualities and changes. It might with equal propriety have been called *persistence*, as that which stands unchanged through all changes successive in time. But as it stands out knowable in its attributes we speak of its *existence*.

Here we have the synthesis of phenomenon and being. It is the synthesis of subsistence or substance and ex-istence. The Being in one aspect subsists, in another it exists. The phenomenon is simply the existence of that which subsists and persists, revealing it to our knowledge. As revealed or appearing we call it phenomenon. But it is the phenomenon or appearing of the being. The phenomenon is filled with the being: it is the being ex-isting so as to be knowable; and thus it is the true and real manifestation of the being.

V. Being is the fundamental reality; all other ultimate realities are determinate of being and have no significance otherwise. Being is presupposed in all the other ultimate realities. The other realities primarily known in presentative intuition are modes of the existence of being. The ultimate realities of Rational Intuition are realities only as they pertain to Being; they are the Truth, the Law, the Perfection,

* De Trinitate, Lib. VII., c. 4.

the Good of being; and the Absolute is an empty idea except as it is known as Absolute being. Being is a datum prerequisite in all generalizations and in all thought. Accordingly Aristotle called the categories genera of being or of beings, *γένη τοῦ ὄντος* or *τῶν ὄντων*. He explicitly recognizes concrete, individual, determinate being (*τόδε τι*) as the unit of knowledge, and primary being (*πρώτη οὐσία*) as present in all reality, known in all knowledge, and supposed in all the categories.*

Reality is a broader term than being. While the qualities of a being cannot be thought of as existing separate from the being, we may direct attention to a particular quality and thus abstract it in thought. Such an abstract idea is a reality, but we cannot call it a being. Reality includes being and all its modes of existence and the forms in which reason knows it. A thought or feeling or action is a reality, but is not a being. Modes of existence, however, have no reality, except as modes of the existence of being. However abstract a general notion may be it is real only as it is a subjective notion of the thinker, or is the notion of modes of existence in some being. A centaur is real as the fancy of a mind. Solidity is real not only as the thought of a mind but also as a property of a body. There is no reality apart from being.

§ 30. Modes of Existence.

I. POWER. This is the first mode of existence.

In knowing action, man knows power to act. He knows his own power in his own action and the power of outward objects in their action on his organism. In action being exists or comes out to view as having power to act. Power is the primary mode of existence; it is characteristic of all beings and is their primary manifestation, whereby they are knowable. Power to act is known immediately in self-consciousness and sense-perception; it cannot be defined; but is known only in the presentative intuition of it. Power may be distinguished as of various kinds by the actions in which it reveals itself, as power of knowing, thinking, determining, power of communicating and arresting motion.

When a being is observed to exist in the continuous and unchanging manifestation in itself of any power, we call the being a substance and the power a quality. When the being is observed to manifest power in any beginning or change of existence in itself or another we call the being a cause, the power an energy and the beginning or change of existence an effect. Substance and cause are different names of being according as its powers are observed in continuous and unchanging

* *Τὸ δὲ τὶ λέγω καθ' ἐκάστην κατηγορίαν.* Met. p. 1032a, 13-15.

manifestation of itself, or in a beginning or change of existence in itself or another.

The present tendency of scientific thought is to the conception of nature as dynamic. Matter is no longer inert, but energetic; all masses are in motion; the molecules are in motion among themselves; an atom itself is, as some suppose, a whirling vortex of matter. Rest is relative only. Accordingly the so-called qualities of beings are called powers. Hence it is not uncommon to designate a being as a power, although this language is to be accepted only as a metonymy. Prof. Bowne says, "Substance is individualized force or power."* But this is inadequate; for both power and individuality are modes of existence, and have no significance, except as the power and individuality of a being. If being is nothing without power, power is nothing without being. Nor does any one in this way escape the recognition of being. Every attempt to identify being with power must issue in hypostasizing the power; then we have the power hypostasized and the power appearing in qualities and acts, and find ourselves again confronted with the old two in one, substance and quality, agent and action, being and existence. No thinker can throw his thought below *being*; nor can complete his thought above it and without it.

Cause is not merely a form of pure thought without content; its content is being exerting power in effecting a beginning or change of existence. Cause and effect are not mere antecedent and consequent; the change called the effect is effected by power in the cause. And what power is, is known in experience by presentative intuition. James Mill says that the idea of power in causation is "an item altogether imaginary."† But, if so, whence came the idea of power, which all men have? Mr. Mill's assertion implies that imagination has the transcendent power of creating the image of an elemental reality never given in intuition. And it contradicts the universal consciousness. Every man distinguishes a cause as exerting power from a mere antecedent; and all language indicates the distinction. The fall of the mercury in a barometer is the antecedent of a storm, but not its cause; the opening of the floodgates is an antecedent of the flow of water and the turning of the water-wheel, but not their cause. W. R. Grove says truly that to cease to use the words *cause* and *force* with this meaning would render the language unintelligible.‡

A cause may be *agent*, or *transitive*, or *reactive*. An *Agent* cause merely acts or exerts power without effect beyond the act itself; as, I think, I choose, I determine. There is also no causative act interme-

* Studies in Theism, p. 234.

† Analysis of the Human Mind, Vol. II., p. 256.

‡ Correlation of Physical Forces, Youman's Ed., pp. 18, 21.

diate between the agent and the action; the being manifests itself in the immediate forth-putting of power. The act must be referred to the agent as its cause, and that which is caused is merely the act itself. A cause is *transitive* when the power passes beyond the immediate action and effects an additional change; as when by volition I raise my hand, and move the air in contact with it. In this case the cause produces the effect by an act of power intermediate between the cause and the effect. Physical science recognizes an actual transmission of energy. A *reactive* cause produces an effect by power reacting against a power acting on it; as arresting motion. A personal being is a *free* cause. He not only does his own actions, but in the exercise of his energy he is autonomic, self-directive and self-exertive.

All finite beings are acted on by powers exerted on them by some cause; the being so acted on is *object* or *recipient*. This corresponds to the Aristotelian category of *passion*. The effect of the action is a new action in the recipient; as the stroke of the bat communicates molar motion to the ball or the blow of a hammer communicates molecular motion to the anvil. Locke properly called this receptivity passive power.

II. ONE and MANY. The second mode of existence.

1. *Individuality* and *Identity*. In knowing himself as the subject of diverse qualities and of successive acts man knows himself as an individual, as one and the same being in all the diversity of action which he knows in immediate consciousness or in memory. It is not by reflective thought that he combines these diversities into a unity; but in every act he is conscious of himself as one and the same self. He cannot be said even to remember himself, since the knowledge of himself as persisting the same, is presupposed in the knowledge of succession and in the memory of past acts. Thus the knowledge of individuality and identity originates in self-consciousness, as already explained.

Individuality, however, does not imply simplicity. It is always a unity of the diverse; the human mind cannot think of an individual that is perfectly simple. The unity of an individual is not of several beings in one, but of several powers in one and the same being. A man is many-sided; but always knows himself as one and the same.

The individual is not indivisible in the sense that his various modes of being cannot be distinguished in thought, but in the sense that the unity of those modes is not a unity of thought merely, but a unity as the modes of existence of one and the same being.

The individual is not indivisible in the sense that it is independent and indestructible; but in the sense that the being remains one and the same in all modes of existence however diverse, and in all relations

to other beings however complicated. A person can never be blended into another being or lost in any combination of beings. It is always one and the same person. Nor can the person be divided into two persons, for the division would be the extinction of the person. So necessary and universal is this knowledge of self as an individual being, that it has been the common and spontaneous belief of mankind; and the belief has been so inwrought into their constitution that they have believed that through even the change which takes place at death the man persists, as he has persisted through all the changes of life, and survives in another mode of existence, the same individual being. The explanation of this world-wide belief as if it originated in man's sight of his own shadow or his remembrance of his dreams is a conjecture not verified by observed facts and as an hypothesis is entirely inadequate. The only philosophical explanation is found in the fact that man knows himself as persisting one and the same through all changes, and that this knowledge of himself is presupposed in the unity and continuity of all knowledge. This knowledge is included, at least as virtual or implicit consciousness, in all knowledge whatever.

2. *Individuality and otherness or alterity.* We have been considering difference of qualities or powers in the same being. There is also the distinction of being from other beings, not merely by qualities or powers, but also by being itself.

As the knowledge of individuality and identity originates in the knowledge of self, the idea of otherness originates in our knowledge of beings not ourselves. In perceiving an outward object I know it as a being acting on me or on which I react. The perceptive intuition presents the "matter" or object of the knowledge, and the reason sees it in its rational "form," as the power of a being that is not me; it is *another* being. When a man knows himself as *I* he may know another person as *Thou*.

In logic an individual is a completely determinate being. It may belong to a class, but it has peculiarities by which it is distinguished from all other individuals of its own or any other class. In logic two beings completely determinate and just alike would coincide and become one; because logic, in forming its general notions, recognizes nothing but the attributes and attains nothing but an idea or notion. Hence Leibnitz insisted that no two things can be exactly alike;* confounding the logical notion with the being, and imagining that the beings would coincide and become one as the logical notions do. It is one of innumerable instances of philosophers running into profound errors by confounding logical abstractions with concrete beings. But, as we have

* Nouveaux Essais, Avant-Propos.

seen, the objects of concrete thought are beings in their modes of existence. An individual is not only completely determinate, but is also a completely determinate *being*. And if the attributes of two beings were precisely alike, they would still be separate as two distinct beings—separate by the whole breadth of being.

The ultimate units of all thought are of three classes:—Finite persons; Material beings, whatever the ultimate units of matter may be; God the absolute and unconditioned One.

3. *Number*. The idea of number originates from the knowledge of beings as individuals. They are thus known as one and another. Not attending to their peculiar attributes, but simply to the individuals, we know them as distinct beings, one and another and another. Man then learns to distinguish one from two, two from three, as groups of different numbers come before him; and to these groups he gives names, one, two, three and so on. When familiar with the names, he comes to abstract the beings, and the empty forms of number remain; which he designates by symbols. He then invents some method of notation by the multiples of some unit-number, by which he is able to designate large numbers and to calculate arithmetically.

The knowledge of number is given in the virtual or implicit consciousness so soon as a man knows himself as an individual and distinguishes himself from another. But the mind attains to the explicit apprehension of the empty forms of number and learns to name them only by a slow and difficult process. Children must have visible objects to count for a long time before they can reckon by the abstract forms and names. The capacity for arithmetic is comparatively late in its development. And anthropologists tell us of savages who have attained the idea of a divinity before they could count beyond the number of their fingers.

Some philosophers have proposed the theory that the idea of number originates from the idea of succession in time. This theory is not satisfactory as an explanation of the idea, and is not supported by any known facts.

III. *EXTENSION IN SPACE*. The third mode of existence.

In perceptive intuition we have knowledge of bodies extended in space. We know our own bodies posited in space and moving in it. Also by handling bodies I know them as extended. Also by moving my body from place to place or extending my hand from one body to another I have knowledge of distance and direction. Thus in perceptive intuition I have immediate knowledge of extension in three dimensions, of distance and of direction.

If now in thought I abstract the body from its place, void place is left; I cannot think it away. It is empty room for a body. In passing

from place to place, I find extension, as room for body, continuous, and since all place that I observe is continuous I may infer by the Baconian induction that room for bodies extends continuous in the three dimensions to the farthest stars. So far our knowledge by perceptive intuition and our reflection on it extends.

Now by rational intuition we know that room for bodies is continuous, immovable and illimitable. It is impossible to think it absent anywhere; it is impossible to think that it moves on itself or is in any way changed; and it is impossible to think it limited, because it cannot be bounded except by further room. We have also all the rational intuitions which are the basis of geometry. Thus we have the knowledge of space as reason knows it in its "forms" of universal and necessary truth.

Space as thus known is not a pure subjective form of thought, but is a form of things. The particular reality which gives it content is the extension of bodies in three dimensions, their distance and direction as intuitively perceived and all that we learn of the same in thought. By rational intuition this reality is known in its universal significance as continuous, immovable, unchangeable and illimitable room for being. Yet, as known in rational intuition, space has no significance except in relation to bodies and cannot even be thought except as room for them. The knowledge of body is first; the knowledge of space is derived from it. This is the clear idea of space as it lies unvexed by metaphysics in the mind. And the result of metaphysical thought must still be that space is continuous, unlimited room for bodies, and thus has reality only as related to bodies or at least to the possibility of their existence.

The doctrine that space is merely a subjective form of sense is contrary to all consciousness. Our consciousness that our bodies exist in space, not space in us, is as decisive as consciousness can be. The denial of it is, as Spencer says, "as repugnant to common sense as any proposition that can be framed."* The denial is not demanded by Reason to meet any necessity of thought. On the contrary, the denial of the external reality of space and the affirmation that it is a form of sense within us involve complete egoistic idealism, according to which the world and all in it are merely somebody's subjective impressions and every man has a universe of his own in his own mind; and to every man every other man with his peculiar universe is but a subjective idea. This theory of the subjectivity of space is a part of Kant's phenomenalism; if true, it necessitates phenomenalism and issues in complete dogmatic agnosticism. If space and time have no objective reality, all that we suppose to exist in space and time, whether subject

* The Last Postulate, Westminster Rev., October, 1853.

or object, is also unreal. But space is a form of things; as such, while objectively real to us, it is a form of thought archetypal in the Absolute Reason; and equally are things themselves, with all their principles and laws, archetypal in the Eternal Reason.

It has been supposed that the belief that space has but three dimensions is an ultimate datum of consciousness. But among the strange novelties of our day is a school of mathematicians, of whom the late Prof. Clifford was one, who claim to have discovered a fourth dimension of space. It is evident, however, that in thinking and writing of space with four dimensions or with manifold dimensions, these mathematicians are governed, like the rest of us, by the inevitable ideas and axioms of space with three dimensions. They speak of radii of circles and other straight lines, as if straight lines in the sense in which we use the expression, were known to exist in this inconceivable kind of space. They use the principles true only of space with three dimensions in proving that it has four or more. They speak of curved, spherical, non-homaloidal space as distinguished from space with three dimensions, which they designate as homaloidal or flat; as if space were itself a body contained in space; as if in fact space with four dimensions were a sphere or curved body of some sort contained in space with three dimensions; for it is only in the latter that we have any knowledge of a curve or sphere. Figure, position, distance, direction, so far as the words have any meaning to us, are conditioned on space with three dimensions and are contained in it. They have no meaning when predicated of space itself. Space has no figure, position, distance or direction.

In solving geometrical problems by algebraic methods we sometimes reach an unthinkable and impossible result, as the square root of minus α ; but solving the problem by the geometrical method, the significance of the result is made plain, as that the line is produced in the opposite direction. The hypothesis of a fourth dimension of space is proposed to explain certain unthinkable and impossible conclusions of mathematical demonstrations. The mathematical reasoning issuing in the conclusion may be correct and the conclusion necessary from the definitions assumed. If in the progress of knowledge we become able to look at the problem from a new point of view or to solve it by a new process, the conclusion may become intelligible and the contradiction disappear. But the hypothesis of a fourth dimension of space to explain it is not scientific; it is the farthest possible from a *vera causa*, such as is admissible in a scientific hypothesis; and it explains nothing; for a fourth dimension of space is itself unthinkable, and the affirmation that it exists is simply nonsense, words without meaning, like the old scholastic question, "An chimæra bombitans in vacuo possit comedere secundas intentiones?"

IV. DURATION IN TIME. The fourth mode of existence.

In perceptive intuition we know ourselves as persisting in successive acts; thus we know the duration of existence and the succession of events. If we think away the being that is persistent, there remains the time in which he was existing. That cannot be thought away. Having thus the idea of time, in rational intuition we know that it must be continuous, immovable and illimitable. There must always be time for beings to act. The development of this idea is entirely analogous to the development of the idea of space and needs not be further considered.

It may be added, however, that the distinction is not properly between time and eternity, but between time measured by successive events of existence and time not thus measured. It is not time that flows through successive events, but successive events which flow in time.

"Sur les mondes détruits dort le Temps immobile."

Time is commonly identified with life or history measured by events, and thus conceived as distinct from eternity. There is an eternity past and an eternity to come, and time, in which we live and act, is conceived as lying between them like a strait between two oceans. But the time of our lives might be better illustrated as a current in the ocean, which flows in its own particular course, while the ocean remains the same; and the current as it flows swells with the ceaseless tides and heaves with the ceaseless billows of the unchanging ocean in which it always is.

V. LIMITATION AND QUANTITY. The fifth mode of existence.

Quantity is predicable, not directly of beings, but of their duration, extension and power. The idea arises in the perception of the limitation of duration, extension or power, and of the different degrees of limitation, as more or less. In lifting weights I find my power limited, and limited in different degrees. In moving my hand along lines or surfaces I find them limited and in different degrees. If I hold a weight in each hand I perceive that they are equal or unequal. If I see two straight rods side by side I perceive that they are equal or unequal in length. Thus arises the idea of quantity and of equality or inequality. We are then able to adopt some determinate quantity as a unit for measuring other quantities.

VI. DIFFERENCE AND RELATION. The sixth Mode of Existence.

The foregoing are modes of the existence of beings in their individuality. But beings do not exist isolated; they are in unity with other beings in a system. The peculiarity by which they are distinguished we call difference, and the reality by which they are in unity we call

relation. Difference and relation are observed modes of the existence of beings. We know beings as distinct and different, and yet as in relation, because they exist distinct and different, and yet in relation. It is because beings exist thus that all thought must consist of apprehension, differentiation and integration. Difference and relation are really two modes of existence; but they are so constantly associated in thought that it is convenient to consider them together.

Beings are distinguished and related in each of the modes of existence already noticed. In power uniformly manifested as quality, we have likeness and unlikeness. In the power of knowing and thinking, we have the relation of subject and object. In the energy of transitive cause, we have the relation of interaction; in space, relations of distance and direction; in time, relations of contemporaneousness, and of before and after; in quantity and number, relations of equality, of more or less, of ratio and proportion. There are also distinctions and relations in those forms of power manifested in organic life, as of parent and offspring, and particularly in sensitivity. In personality we find distinctions and relations transcending all that have been mentioned, and characterizing the rational and moral system, in which the interaction is by moral influence and under moral law. The full significance of these is dependent on the rational intuitions and the ultimate realities known through them.

These differences and relations are primarily presented in intuition. Thought does not originate them; it simply traces them out in the unelaborated nebulous matter of intuition. I see at a glance the difference between white and black; if not, no thinking could ever have revealed it to me. In like manner I perceive resemblance. If two silver dimes lie before me, they are both present to my vision and I perceive their likeness. The resemblance is a reality presented in the intuition, of which otherwise we could have no knowledge or conception. It is objected that this process implies memory, comparison and judgment. The objection has force against Reid's theory that we perceive the *minima visibilia* in succession, but is futile against the psychological fact, now generally admitted, that we both perceive and attend to several objects at once. In like manner I perceive intuitively the marbles in my hand as many and as all; or the unequal height of a man and boy who stand side by side. Nor can we discriminate by any kind of difference, or comprehend in any kind of relation which has not first been known in intuition. In thought we trace out the differences and relations given in intuition and so discriminate the beings in their differences and comprehend them in their relations.

The qualities and powers of a being are not properly said to be themselves in relation to the being; because they are of the peculiar

essence of the being as a completely determinate individual. In thought we can abstract quality from substance; and so, accordantly with formal logic, it is common to speak of the *relation* of substance and quality. But in concrete or realistic thought substance and quality are inseparable. Substance is nothing without quality, and quality is nothing without substance. Hence the qualities and powers of a being are not really in relation to the being. In speaking of the differences and relations of beings we assume the distinctness of beings as individuals and speak of their differences from and relations to one another. Difference and relation have no reality except as the difference and relation of being.

A numerical total must be distinguished from a complex whole of interacting beings, as a steam-engine, a solar system, a family, a nation. These are unities by the relation of interacting powers; not mere numerical totals in which the units have no content and in the totality simply count so many. Of a numerical total the maxim is always true that the whole is equal to the sum of all the parts; but this is not true of complex wholes which consist of beings related in unity by interaction of power. A steam-engine, a watch, a family, is far other than the numerical sum of all the parts. We see here the fallacy of those philosophers who accept the maxim as declaring the fundamental constitution of the universe and think they prove the Absolute Being unknowable because they cannot construct it under this maxim; or who propound the numerical triad, unity, plurality, totality, as the basis of all the laws and the limitation of all the matter of thought; or who deny the knowledge of the Absolute because it cannot be found by counting or by the arithmetical rule of addition. These are examples of the evils brought on philosophy and theology by substituting empty abstractions for beings as the objects thought.

By tracing out the differences and relations presented in intuition and inferring others not perceived the mind distinguishes beings as personal and impersonal and comprehends them all in these two classes. It knows all impersonal beings in the unity of a Cosmos or system of Nature, all personal beings in the unity of a Moral System and all finite beings in the unity of a universe in its relation to God.

§ 31. Inferences.

I. Knowledge, at its beginning in perceptive intuition, is ontological; that is, it is knowledge of being.

Ontological knowledge arises at the beginning of knowledge, in perceptive intuition, not in its advanced stages in the knowledge of Absolute Being. This is the critical point in defending the reality of knowledge against agnosticism. It is sometimes thought that the ontological ques-

tion meets us only in the question whether the knowledge of absolute being is possible. It is really the question whether the knowledge of any being is possible. And this resolves itself into the question whether knowledge begins as the knowledge of being. If it does not begin thus, then the knowledge of being cannot come in afterwards. We have already demonstrated that if knowledge begins as the knowledge only of sensations and impressions it can never issue in the knowledge of being.

But it has been shown that knowledge is ontological at its beginning; then it goes on continually as the knowledge of being and must issue in the knowledge that Absolute Being exists; it continues to be the knowledge of being in its regress through conditions and causes up to God. Comte in his Positive Philosophy affirms that, if it is once admitted that we have knowledge of cause or force as distinct from the phenomena of motion, we must eventually admit that there is a God.

II. In man's perceptive intuition of himself and his environment his knowledge begins as knowledge of personal and impersonal beings. The two classes of persons and things are discriminated and comprehended in thought. But the beings distinguished and their distinctive attributes are perceived in the very beginning of knowledge, and equally in all subsequent perceptions. They are presented, as has been shown, in one and the same intuition.

Mr. Mansel objects that consciousness is an attribute of the Ego, and in the consciousness of self the knowledge of being arises; therefore a body cannot be known as a being because, in denying that it is conscious, "I deny the only form in which unity and substance are known to me."* The objection would be valid if my knowledge that the outward object is a being were an inference from my knowledge of myself; but it is the immediate perception of power acting on me, and the rational intuition that all power is exerted by a being. The objection would be valid if the outward object were only known negatively as a not-me, as J. G. Fichte teaches; but it is known positively in my knowledge of my own body and the power impinging on it. Moreover, if every peculiarity of myself is an essential attribute of being, then necessarily I am the only being in the universe. We may know beings in different modes of existence or endowed with different attributes, just as we know dogs of different characteristics.

Phenomenalism has been excluded by the fact that knowledge is ontological in its beginning in perceptive intuition. Now Materialism is excluded by the fact that knowledge in its beginning in perceptive intuition is the knowledge of self, endowed with the attributes of a per-

* *Prolegomena Logica*, p. 125.

sonal being; and Idealism is excluded by the fact that in the same act of perceptive intuition man knows outward bodies occupying space and moving in it, and endowed with the attributes of impersonal being. And the knowledge of each is positive knowledge in one and the same mental act, so that if the knowledge of either is unreal the knowledge of the other is unreal also.

Kant recognizes the "I think," the synthetic unity of all consciousness, as going along with all knowledge, but only as a phenomenal unity of apperceptions separated by an impassable gulf from the real being. Therefore his Ego, Cosmos and God remain mere ideas, necessary indeed, but void of content. To escape from this phenomenalism, J. G. Fichte starts with the knowledge of self as real being. He teaches that things are really and in themselves what they are necessarily thought to be by rational beings, and that therefore, to every rational Ego of which a finite mind can conceive, that is the truth of reality which is necessarily true to thought. But he teaches that the matter of knowledge is itself given by the same synthetic activity of the intellect which, according to Kant, gives the forms of sense and the categories of the understanding; that the outward object is known only as a negation or not-me, not as a power positively acting on the sensorium and revealing a being that causes it. Thus, as Kant himself suggested, Fichte's attempt to attain a knowledge of the world from self-consciousness without empirically given matter, gave only a shadowy and ghostly impression instead of real being. And in all his later modifications of his philosophy he cannot transcend nor escape from his primitive idealism. His God is the moral order of the universe, his universal or absolute Ego relapses into an idea coming to consciousness of itself in individual form in man.

Hegel seems often close to the most fundamental comprehension of the true reality. For instance, with him the antithesis between phenomenon and essence, between what appears and what is, is only an antithesis of two human modes of conception which are afterwards identified in a synthesis. This synthesis is the reality; the phenomenon is pervaded with the essence and is thus its entire and adequate manifestation. Again, according to Hegel, there is one spiritual being to whom man is related, not merely as a part of the world, but as participating somehow in the self-consciousness of that being—a mode of presentation which involves Pantheism, though suggestive of the truth that man is so constituted and so related to God that the normal development of his own consciousness insures his consciousness of the presence of God. Again he presents the great truth that the Absolute Reason reveals or expresses itself in the natural worlds and in the rational and moral systems of finite persons. But here again his method of presentation

is pantheistic. The Absolute underlies the finite universe of matter and mind, not dynamically and rationally, but as their Substance, itself coming to consciousness in man. It exerts, or thrusts itself forth *ad extra* in nature; it "externalizes" itself, "becomes other than itself." By means of a progressive development of nature from the lowest to the highest stages the Absolute Reason returns from this "otherness" or "self-estrangement" into itself in rational spirit. Nature is striving "to recover its lost union with the idea;" this union is recovered in spirit, which is the goal and end of nature. A fourth instance of near approach to the true statement, while yet missing it, is found in his famous identification of things with thought. This approximates to the true synthesis of the two, which is that the universe is the progressive expression of the archetypal thoughts of God; that the necessary principles which are forms and laws to thought are eternal in the Absolute Reason and thus are forms and laws of things; that the absurd cannot be real; and whatever exists is amenable to reason and capable of rational explanation. Hegel's own statement of the identity seems sometimes to convey this meaning, when he says that the rational is real and that the real is rational. Here again by his *a priori* method developing his own thought he seems to identify things with the subjective process of thinking, and so to establish idealism. We find another instance when he says that God, aside from what we know of him through the finite universe of nature and spirit, is pure Being, without determinate attributes, entirely void of content, and therefore identical with Nothing. This is the truth that the idea of the Absolute, aside from what we know of it as the ground of the universe and accounting for it, is void of content, and every attempt at an *a priori* development of what it is, is nugatory. The purely *a priori* development of the Absolute is not legitimate to the human mind. This bold attempt Hegel makes. Clearly seeing that the purely *a priori* absolute is entirely indeterminate and equal to nothing, he fails to recognize this zero as a symbol of the cessation of thought; he founds his philosophy on this zero and attempts to develop from it both the universe and the content of the Absolute itself. He immediately asserts that the nothing is a Becoming, and so, *salto mortali*, violently springs back to the idea of determinate Being. He conceives of the Absolute as externalizing itself in nature; his philosophy passes out with it into nature and returns with it through nature to spirit and to the Absolute now known as Absolute Reason. But from his starting point this passage to the knowledge of God is impossible. He effects it only by taking up truths belonging to a different system. Hence, after all, the ideality of the finite is inseparable from his system and every true philosophy must be an Idealism. The Absolute itself, even in the highest fullness of mean-

ing which he attains for it, is merely an Idea. Its development must be primarily, as he himself avows, a mere logic or science of thought; and his curious identification of the processes of the world's development with processes of logic is a legitimate and necessary result of his system. Had he rightly understood his maxim, "Being=0," as a symbol of the cessation of thought, warning him off from a wrong and abortive method; had he begun with the knowledge of beings, personal and impersonal, as they exist and are known to us in the universe; had he passed beyond the entanglements of formal logic and used the scientific methods of concrete thought, he would have established an impregnable philosophy of real being. Then by the rational intuitions which are regulative of all thought he would have reached the knowledge that Absolute Being exists not as a zero but as a Being, the ultimate and fundamental Reality; not as a Being of which we know that it is, but know not what it is, but a being endowed with all the attributes necessary as the Ground of the universe; thus would he have found the ultimate Ground and Unity of the All in Absolute Reason, the personal God. Then he would have found the synthesis of being and thought:—thought eternal and archetypal in God, the eternal Spirit—the constitution of the universe in the truths, the laws, the ideals, the worthy ends which are eternal in the Absolute Reason, and of which the universe, with its personal and its impersonal beings, is the always incomplete, but the always progressive expression.

The failure of these great systems demonstrates that we must know *being* in ourselves and our environment, before we can know *being* or even have any real idea of it in other finite persons or in God.

III. In perceptive intuition knowledge begins as knowledge of determinate being. It is the knowledge of myself or of outward beings in particular modes of existence. The concrete determinate being is the unit of thought. It is determinate as an individual being, never lost by being blended into another being. It is also determinate by its peculiar modes of existence.

1. This excludes the error that being is in the genus, and phenomenon alone in the individual; that the human race, for example, is the reality, and the individual but an aspect or appearance of the universal man; that we must begin with the genus or the universal, and from that descend to the individual. This error is contradicted by human consciousness in every conscious act. Here it is objected that if we proceed from the existence of finite beings to the existence of God, we make God's existence dependent on the finite. "A God proved by us," says a brilliant writer, "would be a God made by us." This is the fallacy, very common in agnostic and pantheistic philosophy, of identifying the order of our own mental process with the real order of the

dependence of beings. This objection consists in identifying God's actual relation to the universe, with the mental processes by which we come to the knowledge of Him. It is arguing that because our belief in God is an inference from our knowledge of finite beings, therefore God is dependent on finite beings. Whereas the true significance of the thought is just the contrary; because we know the finite to be dependent we know that there must be an absolute being that is independent and underived. We have a converse example of this fallacy in Hegel's assertion that God, considered as existing before the created universe, is pure being and the same as nothing. It is the fallacy that because a purely *a priori* conception of the Absolute, excluding all knowledge of him through the created universe, is without content and equal to nothing, therefore God himself is nothing, if independent of the finite universe. Whereas when once we have attained the true knowledge of God through the finite universe, we know that he must be independent of it and that it is dependent on him. Therefore God must be thought as the *prius* of the universe; and is thought as possessing every power which, as accounting for the universe, we necessarily attribute to him.

2. Being is not the *Substantia una et unica* of Spinoza and the Pantheists, the one only substance of which all particular beings are the modes of existence. Spinoza defines substance: "By substance I mean that which is in itself and is conceived by itself; in other words, it is that the concept of which does not require any antecedent concept from which it must be formed."* "Substance is not manifold or multiple, but exists single and is ever of one and the same nature."† This definition of substance carries us at once to Hegel's pure being, void of all content and equal to nothing. In defining substance from the relation and order of our conception of it, he falls into the fallacy, already exposed, of identifying the order of our mental processes in gaining a knowledge of the universe and of God with the order of their actual relations and dependence. He argues that if the conception of finite beings precedes in our mental processes the conception of the absolute substance, then the supposed substance would depend on the finite beings and would not be the absolute substance; therefore that only is absolute substance which we conceive by an original conception springing immediately from our consciousness without antecedent. Such a conception is of course impossible, and can be represented only as zero. Thought has ceased.

A moment's thought discloses the fallacy. In reality God is absolute and eternal, preceded by nothing, dependent on nothing; the universe

* Ethics: Def. III.

† Letter 29,

is consequent and dependent. But in our knowing the universe, we must first know the particular realities present to consciousness, and thence proceed to the knowledge of God as their ultimate ground and reason. While God is dependent on nothing antecedent to or outside of Himself, our knowledge of Him is preceded by the knowledge of finite beings and dependent on it. The human mind does indeed form concepts not derived from or dependent on any antecedent concept; but these are the original concepts or notions of particular beings in particular modes of existence given in primitive, intuitive knowledge and simply attended to and apprehended in thought. Spinozism is vitiated both in its definitions and its development by identifying God and the universe with the process and products of logic. Of this fallacy Spinoza remained unconscious.

Also, in regarding the Self-existent and Absolute Being as the one only substance of which all finite beings are modes, he falls into the illusion of conceiving it as continuous, extended substance, heaving itself up in the various modes of existence as the ocean heaves itself up in waves. Hence also the illustration used by his disciples that a man is like a bottle of the ocean's water in the ocean, temporarily distinguishable by its limitation within the bottle, but lost again in the ocean so soon as the fragile limits are broken.

But we have seen that real knowledge begins in the knowledge of particular beings determinate both by their individuality as beings and by their peculiar modes of existence. This excludes Spinozism. The current scientific theory of atoms and molecules is entirely subversive of Pantheism. On this theory the unity of the manifold can no longer be found in continuous substance, but only dynamically and rationally in power, thought, purpose and a rational system. In real knowledge, Theism and it alone enables us to comprehend the multitude of individuals in a system in which we find at once the unity of thought and the unity of being, and thus solve the ultimate and inevitable problem of the Reason. It builds on the knowledge of determinate beings; not on

"Intuitions, grasps of guess,
That pull the more into the less,
Making the finite comprehend
Infinity."

These lines express the common fallacy of identifying the relations and order of the universe with the relations and order of our own mental processes. Real knowledge does not "pull the more into the less," but proceeds from the particular to the universal according to the necessary laws of thought. Knowing determinate beings in their powers, differences and relations, reason, in the light of its universal principles, sees

the necessary existence of being absolute, unconditioned and all-conditioning; not an absolute identified with the universe, not a universe identified with the absolute; not an absolute formed by excising all known positive powers of finite being and so identical with non-entity; not an absolute determined *a priori*, and so empty of all content, but an absolute BEING, known as the ground and sufficient reason of all that is in the universe, the unconditioned and all-conditioning being, having in himself the powers which account for all things, the source of all finite beings, of all power, of all truth, law, perfection and good, the indivisible One, distinct from the universe which depends on him, the absolute Reason, the all-perfect God.

3. Finite persons and things are real beings. This exposes the error of those imposing systems which, seeking an idea of being more real than being itself, declare that the only real being is the Absolute existing not only out of relation to our faculties, but out of all relations, the One which is identical with the All; and that all finite beings are unreal and non-being, mere modes of the Attributes of the Absolute. These theories necessarily issue in Agnosticism, since they resolve the whole universe into the Absolute, and the Absolute itself into an adjective without a noun, a quality without a substance, a thought without either a thinker or an object thought. The maxim on which these theories rest should be that direct contradiction of Descartes which Feuerbach avowed as the basis of his own philosophy: "*Cogitans nemo sum; cogito, ergo omnes sum homines.*"* Of this type was the pantheistic philosophy of Germany, which developed the errors, but not the truths, of Kant's system. Accordingly we find I. H. Fichte elaborately proving the reality of finite things, though, like Lazarus, with the graveclothes of the pantheistic philosophy still entangling his steps.† Mr. Mulford, on the contrary, follows in the wake of the German Pantheism: "Being is of itself, in finite conditions, a vacant phase of thought." "The empty notion of being as derived from finite existences."‡ But if the knowledge of being is not given in intuition it is impossible for thought to create it. If we do not know real being either in ourselves or the objects about us, we can never know the being of God. A world of "vacant phases of thought," the thinker himself being one of them, can never carry the thought to the being of God.

The word *being* has been often used in philosophy to denote any object of thought of which it can be affirmed that it is. *Being* then would denote thought, feeling, motion, distance, relations, conditions as

* Quoted, Mansel, Limits of Religious Thought, 289.

† Theistische Weltansicht, §§ 30, 31, pp. 108-114.

‡ Republic of God, pp. 2 and 34.

well as persons and things. Thus including all persons and things, all qualities, acts, conditions and relations, it has no distinctive and essential content by which it can be distinguished from anything else; it is completely indeterminate. It is in fact, as Hobbes called it, an hypostasizing of the copula *is*, which denotes the connection of any predicate with any subject. Logically the inference follows that being, since it is entirely indeterminate, is the same as nothing. Many using the word in this latitude, still attach to it, wittingly or unwittingly, its legitimate and distinctive meaning, and conclude that being in every sense is a non-entity. Mr. Mulford seems to have followed this track to his Hegelian conclusion: "In the process of logic through finite conditions, the notion of being is an empty phase of thought, and is resolved through a logical necessity into mere nothingness; but the notion of being derived from finite conditions is not to be applied to the being of God."* Like Hegel himself, he here identifies the world-process with a subjective process of logic, and the world of mind and matter itself and all which it contains with a subjective logical notion. And throughout, Mr. Mulford identifies the necessary passing in human thought from the finite to the infinite, with the objective dependence of God's being on the finite and its subsequence to it.

Those who deny that finite persons and things are beings, argue from the fact that they are derived and dependent. This assumes that eternity and self-existence are essential to being. This is not true. So long as I exist I know myself as being, whether my existence began lately and will soon end or I exist forever. We must have the idea of being before we can consider its origin and dependence, its finiteness or its infinitude, its conditionateness or its unconditionateness.

IV. Being is not an attribute but the subject of attributes. It is subject and attribute in synthesis; or since the being appears in its attributes, we say that being is the real and the phenomenal in synthesis. This is in contradiction of Kant's antithesis of the real and phenomenal.

Much of the confusion in discussing being arises from regarding it as an attribute. But I do not predicate being of myself as an attribute; the being is myself, the subject of all my attributes. When I say, *John is a being*, I do not predicate *being* of him as an attribute, but simply affirm that he is one of the class of beings; just as when I say *John is a man*, I do not affirm that *man* is an attribute of John.

Being is not a name of the sum total of all attributes. For if so it is entirely indeterminate and equivalent to nonentity.

Hegel in the beginning of the logic says we cannot think less

about any thing than when we predicate of it *being*; that is, when we say it is. Being he regards here as the noun corresponding to the copula *is*, and denoting all possible predicates. Hence it is entirely indeterminate. But being is not an attribute but the subject of attributes. The affirmation respecting any object that it is being is not a weak affirmation; it affirms that it is the subject of attributes.

In this affirmation I also predicate of the object of thought, those attributes which are common to all beings, whether persons or things, whether finite beings or the Absolute being. These I suppose to be power, unity and identity. When I say of any thing that it is a being, I affirm that it is a subject of attributes, among which must always be power, unity and identity; it is endowed with power and persists as one and the same being. This does not preclude attributes peculiar to itself, any more than the fact that a horse is an animal, precludes qualities peculiar to the horse. Descartes held that there is nothing common to matter and mind; that communication between them is possible only by the incessant interaction of God. But if the impassable separation is in the very nature of matter and mind having nothing in common, how can God, who is Spirit, pass across to act between matter and mind without ceasing to be pure spirit?

V. The determinateness of being does not involve limitation.

The scholastic maxim, "*omnis determinatio negatio est*," contradicts this proposition and affirms that all determinateness is negation. To this agnosticism appeals as to a self-evident axiom from which to demonstrate that the Absolute Being cannot be a person and is unknowable. This also is the offspring of that prolific breeder of errors, the identification of beings and their powers with the forms and processes of logic. The maxim is true of mathematical totals; the determination of the total sum is a limitation to that sum and a denial of all not included in it. It is true of a logical general notion; the predication of attributes essential to the general notion or concept enlarges its content but limits its extent. The more attributes essential to the concept the fewer the beings included under it. The more determinate the concept the more beings excluded.

But the maxim has no application whatever to real concrete beings; and can be applied to them only as they are confounded either with a mathematical total of parts or with a logical notion or concept. Being is determinate in itself as a being. That which is a being is removed from nothing by the whole breadth of being. To say that anything is a being is not negation of reality but affirmation of reality; it is not the affirmation of limitation but of positive reality. To be is more than not to be.

And the possession of *powers* by a being is not a limitation but ■

greatening of the being; the more and the greater the powers, the more and greater the reality, and the farther the remove from nothing. And the affirmation of these powers in defining the being is not a negation, it is not the assertion of defect but of reality. The more determinate a being is in its attributes the higher it is in the order of being. The notion *dog* has more essential attributes than the notion *animal*; and thereby the extent of the *notion* is limited; there are fewer dogs than animals; but the *dog* is not limited but greatened by the attributes which make it more determinate. Man is a being still more determinate, because he has other and higher attributes; but he is not therefore less than a dog but greater. Reason compels us to believe in the existence of absolute being, the Absolute Reason acting in freedom, endowed with almighty power, perfect in wisdom and love; but these attributes do not limit, they greaten him; the determinateness of his being in the possession of these attributes is not a negation nor a limitation; and the affirmation of it is not a negation of reality but the affirmation of reality and perfection of being in its highest thinkable richness. This principle Spinoza himself enunciates in the ninth proposition in the first part of the *Ethics*: "The more reality or essence (*esse*) anything has, the more attributes belong to it."

In like manner the complete determinateness of the being as an *individual* is indeed a negation or limitation of the mathematical total and of the logical general notion, but it is not a negation or limitation of the concrete being. It is no limitation of a person that he is himself, and not a stone, or a dog, or another person. This is inherent in the essence of personality and is a perfection and not an imperfection, a reality and not a limitation of the being. The loss of this individuality would be the loss of being itself; the loss of it would involve negation. Hence the affirmation of individuality is not a denial of reality but an affirmation of it; but the denial of individuality would be a negation of reality and of being.

It follows that God is not limited by his own unity and identity whereby he is distinguished from stones, and dogs and men, and all finite things. God is not the sum total of finite things; he is not the largest general notion of logic; he is not the universal abstract idea of pure being; he is not the sum of all attributes; he is the living God, distinct in his divine oneness of being from all finite beings. That he is the Absolute Reason and the Almighty Power, limits and conditions all other beings as finite and dependent on him; but it does not extinguish the reality of their being; and their being does not limit him. In truth the universe, instead of limiting God by its existence, is the ever-progressive expression and revelation of his infinite fullness

of being and his complete determinateness in all the attributes of God Mr. Mulford says, "In the realization of personality as it advances in man toward the universal, this element of individuality tends to recede and disappear. But the personality of God, in his own infinite being, is not formed in the differences of a finite process, that the element of individuality should attach to it."*

This belongs to those nebulous spheres of thought in which the sharp distinctions of real being have faded away, and the progress of man towards unity with God can be conceived only as a gradual loss of his own individual being in his progress towards absorption into the misty homogeneousness of the Absolute.†

VI. The distinction of science into physical science and metaphysical, has its origin and necessity at the beginning of human knowledge in perceptive intuition. In this, as we have seen, the knowledge of being in its modes of existence originates. We have seen that self-consciousness and sense-perception, in one and the same act, reveal to man himself and his environment. Here, therefore, in the very beginning of human knowledge are the origin and necessity of this twofold distinction of science.

Accordingly we find that human thought from the beginning has flowed in these two channels. In some ages men's thinking has been chiefly occupied with the one; in other ages with the other; and from time to time with controversies as to the legitimate relations of the two. But always the human mind busies itself with both. Complete positivism, the theory that human knowledge is confined to sensible phenomena, is incompetent for physical science as really as for metaphysical, and the scientific mind has never been able to confine its investigations within those narrow limits. Boole says: "The particular question of the constitution of the intellect has . . . attracted the efforts of

* Republic of God: p. 32.

† The maxim, "*Omnis determinatio negatio est*," is commonly attributed to Spinoza. I have not, however, noticed it formally stated in his writings. In letter 40 (to an unknown correspondent) he says: "If the nature of that being is determined and conceived as determined, that nature is conceived as not existing beyond those bounds (*terminos*); which is contrary to its definition" as infinite. Evidently he deludes himself here with the conception of a body bounded in space, which necessarily excludes all bodies beyond its bounds. In letter 41 he says that determination denotes nothing positive but only the privation of existence, and therefore whatever exists cannot be determinate; which would imply that it cannot exist in any definite mode. Elsewhere also his reasoning rests on the assumption that the maxim is true. But he seems to be inconsistent with it when he ascribes attributes and modes of existence to the one and only substance and so identifies it with the universe; and when he determines it by his definition, "*Natura naturans et natura naturata identitate est Deus*." And Proposition IX. of the Ethics, already cited, seems to enunciate a principle contradictory of the maxim.

speculative ingenuity in every age. For it not only addresses itself to the desire of knowledge which the greatest masters of ancient thought believed to be innate in our species, but it adds to the ordinary strength of this motive the inducement of a human and personal interest. A genuine devotion to truth is, indeed, seldom partial in its aims, but while it prompts to expatiate over the fair fields of outward observation, forbids to neglect the study of our own faculties. Even in ages the most devoted to material interests, some portion of the current of thought has been reflected inwards, and the desire to comprehend that by which all else is comprehended, has only been baffled in order to be renewed. It is probable that this pertinacity of effort would not have been maintained among sincere inquirers after truth, had the conviction been general that such inquiries are hopelessly barren."*

*Laws of Thought, p. 400.

L

CHAPTER VIII.

THE TRUE: THE FIRST ULTIMATE REALITY KNOWN THROUGH RATIONAL INTUITION: NORM OR STANDARD OF THINKING AND KNOWING.

§ 32. The five ultimate realities known through rational Intuition.

IN rational intuition the mind comes in sight of reality of which neither reflective thought nor presentative intuition can of themselves give any knowledge. The ultimate genera of the realities thus given I call the Ultimate Realities known through Rational Intuition, and our ideas of them I call Ultimate Ideas of Reason. They are the *Noumena* in the true sense of the word. This word has, however, been so appropriated by false philosophy, that it is difficult to divest it of the erroneous meaning thus attached to it and I do not attempt to reclaim it.

The Ultimate Realities known in rational intuition, which I shall consider, are five:—

1. The True, the contrary of which is the Absurd;
2. The Right, the contrary of which is the Wrong;
3. The Perfect, the contrary of which is the Imperfect;
4. The Good determined by the standard of Reason as having true worth or as worthy of the pursuit and enjoyment of a rational being, the contrary of which is the Unworthy, the Worthless, or the Evil.
5. The Absolute or Unconditioned, the contrary of which is the Finite or Conditioned.

The four first are the Norms or Standards of Reason and are classed together. They are the basis of Mathematics, of Logic, and of Speculative, Ethical, Æsthetic and Teleological Philosophy. The fifth as the Unconditioned and All-conditioning One stands by itself and is the basis of Theology.

The four first are norms or standards by which Reason estimates and judges beings in all their modes and actions. The True is the rational norm or standard of thinking and knowing; the Right is the norm of efficient action, personal or impersonal; the Perfect, of the creations of thought and their realization by action; the Good, of all

that is acquired, possessed and enjoyed. The third of Kant's three questions, "What can I know? "What shall I do? "What may I hope?" must be divided into two: "What may I become?" "What may I acquire and enjoy?" The four norms correspond to these four questions; the True is the rational norm or standard of what a man may know, the Right, of what he may do, the Perfect, of what he may become, and the Good, of what he may acquire and enjoy.

We also apply these standards to nature. In so doing we assume that nature itself is the expression of Reason and therefore can be judged by the standards of Reason:—the True, the Right, the Perfect, and the Good. If Nature is not the expression of rational thought there is no propriety nor significance in judging it by the standards of rational thought. When we judge of nature by these norms or standards of Reason the questions are:—Does it express or reveal truth? Is it ordered under law? Does it realize or tend to realize ideals of perfection? Is it productive of good?

The ancient classification, the True, the Beautiful and the Good, is inadequate. I have substituted the Perfect instead of the Beautiful as a more correct designation of that idea and comprehending all that belongs under it, of which visible beauty is but a part. I have added The Right. Plato, to whom this classification of the True, the Beautiful and the Good is commonly ascribed, attempted to develop the idea of right from the good, and sometimes seems to resolve virtue into expediency. The idea of the right, however, appears sometimes instead of the true. Pythagoras is said to have discoursed of the just, (*δίκαιον*) the beautiful and the good; and in Plato's Parmenides, Socrates and Parmenides converse of the *just* or *right*, (*δίκαιον*) the beautiful and the good. The idea of the right cannot be developed from the idea of the good and is certainly entitled, if any thing is, to a place among the fundamental realities known in rational intuition.

I call attention again to the fact that rational intuition does not give the knowledge of being, but only of the unchanging forms in which, because the universe is grounded in Reason, all beings exist, and in which therefore Reason, when they are brought under its knowledge, must know them as existing. When any object, thought as a being existing thus or thus, is brought to the notice of Reason, Reason must estimate it according to its unchanging rational forms, as true or absurd, as right or wrong, as perfect or imperfect, as good or evil, and as finite or absolute. The intuition that Absolute Being must exist presupposes the knowledge of beings. Beings are already known to exist; then Reason sees that a Being that is absolute and unconditioned must exist. And again I call attention to the error of abstract and scholastic thought, that because our knowledge of finite beings precedes

our knowledge of the Absolute Being, therefore finite beings must exist before the Absolute Being exists, that the Absolute Being is dependent on the finite, and man has created God. This error is possible only when the methods of concrete and scientific thinking are abandoned, and the notions and processes of formal logic are mistaken for the beings and actions of the real world.

§ 33. **The first Norm or Standard of reason: the true:**
The Norm or Standard of thinking and knowing.

I. The True is the name of the ultimate genus which includes all the universal truths or primitive principles known in rational intuition, the contraries of which are absurd; they are norms or standards regulative of all thinking and knowing. These truths must be distinguished from *facts*, which are enunciations of the knowledge of particular realities (*facta*). It must be remembered, however, that this distinction is not carefully made in the common use of language, scientific or popular. The enunciation of a thought which is the intellectual equivalent of reality, particular or universal, is a truth. We therefore have frequent occasion to distinguish them by a qualifying word or phrase, as universal truth or truth of reason as distinguished from a factual or empirical truth.

The word truth is also used to denote both the subjective knowledge and the objective reality of which the knowledge is the intellectual equivalent. The truths of reason are not merely subjective beliefs, but are objectively real in the sense that they regulate all thought and energy. The principle of causation is not merely a belief of my mind, it is a law of the universe. The correlation of truth and reality appears in the interchange of the words, true and real, as true gold, true piety, the true God.

The English word *truth* (*trow, trowth*), gives prominence to the subjective belief. The Greek *ἀλήθεια*, the unconcealed, gives prominence to the objective reality.

II. The truths of Reason have to us objective reality as principles and laws of things, because they are, as already set forth, constituent elements of rationality eternal in the absolute and supreme Reason.

This accords with the Platonic philosophy, modified as it necessarily must be by Christian Theism. The ideas exist eternal and archetypal in God the supreme reason. The rational ideas of the True, the Right, the Perfect and the Good, and all forms and ideals compatible with them are eternal in the mind of God as an ideal universe before it exists as the universe which we perceive. By his power acting under the guidance of wisdom and love he gives expression to his archetypal

thoughts in space and time, and under the other limitations of finite things. He also gives existence to finite beings constituted rational like himself who, as in their normal development they come to know themselves, know the rational image of God. Here arises a moral system, in which God makes still higher and grander expression of his archetypal thoughts.

Plato sometimes attains this conception. He recognizes the principles of reason as the remembrance of what the soul saw in some former state of existence when in company with God, truths in which God is and in the knowledge of which he is God.* The soul knows God in these truths as the eye by a ray of light knows the Sun. Nor, argues Plato, would this be possible if the eye were not the one of the senses most like the sun.† This often quoted observation, that the eye's power of seeing depends on its likeness to the sun, is not understood in its full significance unless we remember that the ancients supposed that the eye when turned towards the sun was, as it were, kindled by it and emitted from itself the rays by which we see. So the rational spirit, because it is itself reason, sees the light of reason in God. Cicero also says that reason in man is "*participata similitudo Rationis æternæ*" and "*vinculum Dei et hominis*." Augustine teaches the same. "Being thus admonished to return to myself, I entered even into my inward self, Thou being my guide; and I was able to do so because Thou wast my helper. And I entered and beheld with the eye of my soul, (such as it was,) even above my soul, above my mind, the Light unchangeable. . . . He who knows the truth, knows what that Light is."‡ Says Thomas Aquinas: "When we say that we see all things in God and according to him judge of all things, we mean that we know and judge all things by participation in his light. For the natural light of reason is itself a certain participation of the divine light."§ The doctrine that we see all things in God, whatever mistiness and error accompany it as taught by Malebranche and other writers, has at least the significance given to it by Thomas; that man's reason sees the light of the universal reason; that what is the True, the Right, the Perfect, the Good which has true worth, to the reason of man, is the True, the Right, the Perfect, the Good which has true worth, to the universal reason of God; that we know truly even particular objects only as existing in a rational system, and we know them in a system as we know them ordered in unity in accordance with rational truths, laws, ideals and ends.

This doctrine that man knows universal principles of reason which

* Phædrus, 249.

† Republic, B. VI. 508.

‡ Confessions, B. VII. Chap. X. 16.

§ Summa Theologiæ, Part I. Quæst. XII. Art. XI.

are eternal in God the Supreme Reason is not a flight of swarming enthusiasm, but is accordant with common sense, is the conclusion of the most profound thinkers in all ages, is the necessary inference from the most sober investigation of the rise and processes of knowledge and the laws of thought, and is itself the basis, whether recognized or not, of the possibility of science. They are the flighty and heedless thinkers who deny this. So in speaking of Anaxagoras, Aristotle said that, "the men who first announced that Reason (*νοῦς*) was the cause of the world and of all orderly arrangement in nature no less than in living bodies, appeared like a man in his sober senses in comparison with those who before had been speaking at random and in the dark."*

* Quoted by Prof. Robert Flint, *History of the Philosophy of History in France and Germany*, p. 90.

CHAPTER IX.

THE RIGHT OR LAW: THE SECOND ULTIMATE REALITY KNOWN THROUGH RATIONAL INTUITION: THE NORM OR STANDARD OF EFFICIENT ACTION.

§ 34. General Significance.

THE principles of reason and all necessary inferences from them when known as regulative of power are called laws. They are laws to power of every kind, intellectual, physical and voluntary.

I. They are laws to intellectual and physical power.

1. To intellectual and physical power they are laws in the sense that they determine what it is possible or impossible for power to effect. In these cases the relation of the truth to the power as its law is expressed by the verbs; *must*, *can*, *cannot*, and by the nouns, *necessity*, *possibility*, *impossibility*. In this sense these truths are laws of thought. The conclusion of a demonstration in geometry is, "It must be so": it is impossible with the demonstration in mind to think the contrary to be true. In the same sense they are laws to physical power. When we see a stone moving we know that it *must* have had a cause, it is impossible it should move without a cause. A builder *cannot* make a structure stable, if it is not constructed according to the principles of geometry and mechanics; it *must* fall. A projectile of a certain weight propelled by a certain force at a certain angle of elevation and meeting a certain resistance from the air *must* describe a certain curve in its flight. All instances are summed up in the maxim, "The absurd cannot be real." No power can give reality to that which contradicts reason. Whatever is real is capable of reasonable explanation.

2. Conformity of the action of intellectual or physical power to the truths of reason as law, is called *right*, non-conformity is called *wrong*. A boy's solution of an algebraic problem is right; a steam-engine works right, that is, its action is what it must be if in all its parts it is constructed according to the principles of mechanics.

3. The phrase "law of nature" is commonly used to denote an observed uniform sequence of antecedent and consequent. This, however, is not a regulative principle of reason, but merely a generalized

fact. We do not say, "It must be so," but only that, so far as observed, it uniformly is so. The word *law* is here used in a secondary sense; it does not denote a true law of reason, and we are not concerned with it in the present discussion. It is important, however, to note the distinction; because observed uniform sequence is not only dignified with the name of law, but also deified as the cause which sufficiently accounts for the existence and order of the universe.

4. Some laws of nature, which are usually regarded as merely uniform sequences, do in reality rest on rational principles from which they derive all their significance as laws. The law of gravitation is commonly spoken of as expressing merely an observed uniform sequence, but in truth this law is not known by experience but is deduced from an *a priori* mathematical principle. The same is true of the law of the dispersion of light. Also, when science carries an observed sequence beyond the observed facts, the induction rests entirely on self-evident intuition of reason. Also, the laws of mechanics rest partly on the law of causation and partly on mathematical principles both of which are first principles of reason.

II. The principles of reason and all necessary inferences from them are also laws to the will.

1. To the will they are laws, in the sense that they declare what the will in its free action *ought* to do, what is its duty or obligation. To the will the law does not determine what it is possible or impossible for it to effect, nor declare necessity or what the will *must* do. Every man is conscious that in the exercise of free will he can disobey law and can exert all his energies to accomplish ends contrary to reason; yet every man is still conscious that the truth of reason is a law which he *ought* to obey.

2. Conformity of the action of the will with law is *right*, its non-conformity is *wrong*.

3. Truth known as law to a free will is moral law, and conformity of a will to law is right in the distinctively moral or ethical meaning of the word.

III. The law to intellectual power, the law to physical power, and the law to free will have the common characteristic of law in that each is a truth of reason known as a law to the action of power. They are the three classes of rational laws or laws of reason. The third differs from the first and second in that it is addressed to rational beings having free will, it commands action and requires obedience, it imposes obligation or duty, and it may be obeyed or disobeyed; but it brings with it no *necessity* of action. It is moral law. On the contrary the first and second are not laws to free will; they utter no command, they impose no obligation or duty, they can neither be obeyed nor disobeyed, they

carry with them simply necessity. They are not moral law. The word right as applied in each case has the common meaning of the conformity of action to law; but right in its ethical sense denotes distinctively the conformity of the action of a rational being with law by his own free choice of ends and determination of actions.

Law and Right have moral or ethical significance only as applied to rational beings determining by free will their own ends and actions.

Reason knows itself as regulative of all power. In respect to rational free-agents reason knows itself as having authority to give law, to command obedience, to impose obligation.

§ 35. The Ethical Significance of Right and Law.

I. The ethical idea of right and law arises in the rational intuition that I *ought* to act reasonably, that is, in accordance with the truths of reason; or, more generally formulated, "A rational being *ought* to obey reason," or, "what is true to the reason is a law to the will." In this intuition the person comes to the knowledge of a new reality which is expressed in the word *ought* and to which the nouns corresponding are *obligation*, *duty*, *law*. This new reality is that he exists under law; that the universal principles and the necessary inferences from them, which he knows as truths, are laws which he is under obligation to obey. Like other intuitions, this one is practically operative on his action before he formulates it in reflective thought or even recognizes it as a judgment. But as he reflects he finds that what he knows as true to his reason he knows to be a law to action; he finds himself saying I *ought*, and learns the significance of obligation and duty; he finds himself approving some actions because conformed to principles which he knows as true; and this common quality of these acts he calls *right*, and the contrary quality he calls *wrong*. Thus the ideas of right and wrong rise directly from rational intuition. Without rational intuition man could never have known the difference of right and wrong or had any idea of law, duty and obligation.

II. Significance of ethical terms.

1. *Ought*, *obligation*, *duty*. Like all words designating knowledge given directly in intuition, these terms cannot be analytically defined. They can be understood only by intuitively knowing them. It is a sphere of reality entirely unique and no definition or explanation can give any idea of it to a being who is incapable of rational intuition. Ethical terms can be explained only by referring to the consciousness of those who have ethical knowledge.

I have already explained the three words, as far as it is possible, in indicating their origin.

2. *Right*. *Ought* expresses the relation between a rational being acting freely and the truth of reason. *Right*, as an adjective, is predicated of action or character which is conformed to the truth of reason. *The Right*, as a noun, is the name of this common and essential quality of such character or action; it means the conformity of action or character to the truth of reason, known as law to action.

Holiness and *sin*, *virtue* and *vice*, as denoting character and action, are properly predicated of persons. The man is virtuous or vicious. Right and wrong are more properly predicated immediately of character and action; as, virtue is right, vice is wrong. We sometimes say, however, the man is right, meaning right in character or action; for right and wrong have no ethical significance except as related to the action or character of a rational free agent.

Right is also used in a different application, as correlative with duty. If I owe five dollars, it is my duty to pay it to my creditor and his right to receive it. The rights of one are correlative to the duty of another. No man has rights in respect to others any farther than they owe duties to him. If all men did all their duties, all men would have all their rights. Selfishness inflames a man to loud declaration of his own rights, while he thinks little of his own duties. Christ puts it the opposite way. He requires universal love; he would right human wrongs by teaching men to think first of their own duties rather than of their own rights.

3. *Law* is truth considered as that to which rational beings are under obligation to conform their characters and action. When I know myself under obligation to conform my action to truth I know the truth as a law to my action. Law is correlative to obligation.

4. *Authority* is the right to declare and enforce law. The right of an individual to receive payment of a debt or any service due, is a right derived from the law to which both parties are subject; it is not the right to declare and enforce law. This belongs only to a government and is called authority.

The reason, as it reveals itself in the consciousness of an individual, reveals itself as having authority to command. Hence Bishop Butler recognizes authority as the distinctive characteristic of the conscience.* But while the individual's conscience has authority to command him, it does not command others, nor give the individual the right to do so. He must indeed see that what is a universal truth to reason is a law to all men; he may instruct others as to their duty to obey it. But he has no right to command or to en-

*Sermons on Human Nature, II.

force obedience. That right is called authority. That authority rests only in a government.

5. *Government*, in its primary meaning, is the action of will in the light and by the authority of reason, declaring the truth of reason as law and enforcing obedience by the punishment of transgressors. This is the most abstract definition of government possible.

Law which is the truth of reason, is distinguished from government which involves the action of will. Law being of the reason, will can neither create, change nor annul it. Law is above will; will is always subject to law. It is not the function even of government to create law, but only to discover, declare and enforce the laws which are truths of reason; and in so doing government itself must obey the unchanging laws of reason. The authority of government, or its right to govern rests on the reason. The theory of popular government, as Judge McLean expressed it in one of his opinions, is that law is supposed to declare "the collective reason of the people." The authority of government rests ultimately in God, the Supreme and Absolute Reason.

We must distinguish law, considered as the eternal principles of right, from statutes or enactments, in which government declares how these principles are to be applied to particular cases. Government must enact statutes to meet particular circumstances and change or annul them as changing circumstances require. But even here it must use its best wisdom to make enactments accordant with truth and righteousness.

Ethics is the science of law both as unchanging principles and as regulative of conduct in specific cases; both as unchangeable principles in the reason, and as declared and enforced by government. Jurisprudence also discusses the principles of right and their application to conduct, but is confined to the authority and enactments of civil government. Thus Austin begins his "Jurisprudence" with a discussion of the grounds of the authority of government and law and of the obligation to obedience. It is one of the ablest vindications of the erroneous theory of Utilitarianism. Jurisprudence is a branch of ethics. Austin recognizes this; but uses the phrase "*positive law*" in the sense of enactment or statute: "The science of ethics consists of two departments, one relating specially to positive law, the other relating specially to positive morality. The department which relates to positive law is commonly styled the science of legislation; the department which relates specially to positive morality is commonly called the science of morals."*

III. Ethical ideas and moral distinctions, being known by rational intuition, are of the highest certainty.

* Jurisprudence, Vol. i. p. 115.

The objection against the validity of our knowledge of moral distinctions is stated by Hume: "In every system of morality which I have hitherto met with . . . the author proceeds for some time in the ordinary way of reasoning; . . . when of a sudden I am surprised to find that instead of the usual copula of propositions, *is* and *is not*, I meet with no proposition that is not connected with an *ought* or an *ought not*. This change is imperceptible, but is, however, of the last consequence. For as this *ought* or *ought not* expresses some new relation or affirmation, it is necessary that it should be observed and explained; and at the same time a reason should be given for what seems altogether inconceivable, how this new relation can be a deduction from others which are entirely different from it. But as authors do not commonly use this precaution, I shall presume to recommend it to readers; and am persuaded that this small attention would subvert all the vulgar systems of morality, and let us see that the distinction of vice and virtue is not founded on the relations of objects nor is perceived by the reason."* This objection is already answered. It is true that the idea expressed in the *ought* and the *ought not* is different from that expressed in the *is* and *is not*; and it is a unique idea different from all others. It is also true that it cannot be deduced from any other idea, though it presupposes the knowledge of principles or truths of reason. But it is not true that philosophers surreptitiously introduce it without declaring its distinctive significance and its origin. It originates in rational intuition. And I have already demonstrated that rational intuitions are of the highest certainty, that on their validity as knowledge all reasoning and all science depend, and that they are constituent elements of all rational intelligence. In these our knowledge of moral distinctions is rooted deep in our constitution as rational beings and ramified beneath the entire outgrowth of knowledge.

Besides it must be noticed that Hume's objection recoils on himself. Since human thought cannot escape using the *ought* and the *ought not*, and there is nothing in his philosophy which can account for this, the true inference is that his philosophy is contrary to reason and false, not that moral distinctions are unfounded. .

§ 36. Moral Law Universal, Immutable, Imperative.

I. Law is universal, immutable and imperative because it is the universal and immutable truth of Reason known as law to action.

It is essential in the idea of law that it be universal and unchangeable, the law for all times and all places. I refer to law in its principles, not to the rules for applying those principles to determine

* Treatise of Human Nature, B. iii. Part i. Section 1.

the right or wrong of outward acts under changing circumstances. But in determining what is duty in these details there must be appeal to universal and immutable principles or we can never determine the right or wrong of particular actions, just as reasoning however ramified must be regulated by universal principles, or it can never conclude in a true inference.

It is equally essential in the idea of law that it be imperative. It is not advice or persuasion but command. It does not tell us what is agreeable or profitable, but what is obligatory and right. It is the supreme and final standard of right from which there is no appeal and which excludes all right to question or disobey. If there is any difference between right and wrong there must be a law universally, unchangeably, supremely right.

This universality, immutability and imperativeness are essential in law because law is universal and immutable truth recognized as law to action. It is either some primitive principle known in rational intuition or some truth inferred from it. Private opinion does not constitute the law of right. A particular fact does not. If I know that a particular course of action leads me into the fire, that fact is not a law forbidding me to go into the fire; for it may be a martyr-fire. But universal truth, whenever it bears on the will's determination, is a law to the will; and the law is as universal and as immutable as the truth. It is also imperative; for law is nothing else but truth recognized as imperative to will. The *it is* of a fact can issue only in an unregulated *I will*. It is only the *must be* of universal truth which resolves into *I ought*.

II. The law as universal, immutable and imperative implies the existence of God, the Supreme and absolute Reason in whom the Law is eternal. We have seen that this is implied in the idea of the True. It is implied also and even more impressively in the idea of the Right; for in this the voice of the Supreme lawgiver speaks in every man's consciousness uttering a law transcending him and imperative on him. As a universal truth of reason known as law to action, he knows it as law, not to himself alone, but to all rational beings; yet he is conscious that he is not its author and has not authority to enforce obedience on others. There must then be a lawgiver above all men and having authority to command all. The truths and laws recognized by man's reason are without significance and reality as universal truths and laws except as they are truths and laws eternal in a Reason absolute and supreme, and thus regulative of all thought and energy and dominant throughout the universe.

The Absolute Being, however, is not a merely speculative Reason, seeing in itself all truth, law, perfection and good, but an energizing

Reason realizing in finite creations the archetypes of all truth, right, perfection and good which it sees eternal in itself. And these archetypes expressed and realized are the constitution of the universe.

III. Hence all wrong-doing has falsehood and absurdity underlying it as its intellectual basis. Selfishness, if justified, would imply that the selfish person is supreme and that God and all creatures exist to serve him, while he serves no one, an error more extravagant than the old astronomy that the planets and sun and all the stars revolve daily around the earth. Hence the Bible calls the transgressor indiscriminately a sinner or a fool.

IV. Hence law requires conformity to the fundamental realities in the constitution of things. Off Nova Scotia, on the route of steamships to England, is Sable Island. It is but a speck on the chart, but that speck represents reality; the navigator must shape his course to avoid it or be dashed in pieces on it. So truth is correlative to reality; law declares the deepest realities of existence and bids us shape our course in reference to them or be miserably wrecked. It is a command requiring conformity to the fundamental truths of reason and the fundamental realities of the constitution of things.

V. Action in transgression of law must issue in failure and loss. Man, in the exercise of his reason, may transgress moral law. Moral law does not declare the certainty or necessity of an action, but only its obligation. But if man transgresses moral law he is spending his strength in trying to give reality to an absurdity. Selfishness, for example, is a continuous endeavor to attain the highest good by selfish getting and selfish indulgence. But the efforts of a life thus spent must issue in failure. A man may spend his estate and his life in trying to make a machine on the principle of a perpetual and self-perpetuating motion. But he only wastes his estate and life in trying to realize the absurd and impossible. So a man may spend his life in sinning, but it can be only a wasted life. He "loses himself or is cast away." I have called the truths of reason, which determine what is possible for power to effect, the "*flammanitia moenia mundi*." If a man flings himself against these burning barriers he flings himself into the fire everlasting. Truth is the fire of hell.

VI. Law as imperative implies that it is enforced by punishment inflicted by the government for disobedience. This is of the essence of law; otherwise it ceases to be law and weakens into advice. This is attested in the moral constitution of men in the consciousness of ill-desert for sin. And it is no capricious or arbitrary infliction, but is necessary in the constitution of the universe. *Thou shalt* waits always terrible behind *I ought*.

VII. We have now the answer to the common objection that intui-

tive ethics is empty of significance; that its fundamental principle is an identical proposition, "Right is right because it is right." The principle is, "What is true to the reason is law to the will." It has for content the truths of reason. It rests on the fact that man, being in the image of God, is endowed with reason and free will, and that reason, the same in kind everywhere and always, is supreme and absolute in God. The fundamental principle of intuitive ethics has for content all that is true to human reason, and all that is true to the divine reason, so far as known to man, and all that is fundamental in the constitution of the universe. Nor are we obliged to say truth is true because it is true; it is true because it is eternal in the absolute reason, because it is the truth in which the universe is grounded and of which the universe is the expression. Truth is concrete throughout to its primal essence, as it is eternal and archetypal in the absolute Reason.

§ 37. Intuitive Ethics distinguished from Erroneous Theories.

I. It is unnecessary to delay on theories like those of Diderot and Mandeville, which ascribe the origin of moral ideas to association of ideas and to education; for these deny the reality of moral obligation. I have already shown that the association of ideas in the experience of an individual cannot account for the necessary beliefs of reason.

II. The true Ethics is distinguished from theories which attempt to derive the idea of right from that of happiness or the highest good.

The ideas of right and obligation have their origin in reason and have a unique and distinctive meaning; the ethical ideas cannot be derived from nor identified with the idea of happiness or good. Every theory which attempts to derive the ethical ideas from the idea of happiness or good loses their essential distinctive significance, and resolves the right into the agreeable or the expedient. Thus Locke resolves all moral distinctions into the distinction of pleasure and pain: "We love, desire, rejoice and hope only in respect of pleasure; we hate, fear and grieve only in respect of pain, ultimately." And he exemplifies what love is, from the love of grapes: "When a man declares . . . that he loves grapes, it is no more but that the taste of grapes delights him."* Theories of this kind annul all essential and distinctive significance of obligation and duty, of right and wrong, of law and authority; they exclude the very ideas of right and obligation; they lose the right in the agreeable or at best in the prudential.

III. The true ethics, affirming that moral distinctions originate in

* Essay concerning Human Understanding, B. II., chap. 20, sect. 14, 4. See chap. 28, sect. 5-14, and chap. 21, sects. 55, 70, and B. I., chap. 3.

the reason, must be distinguished from theories that these distinctions originate in the feelings; that our moral ideas arise from the feelings which as motives impel us to certain acts as right and deter from others as wrong, and which react in emotions, as in remorse for wrong-doing and satisfaction in right-doing.

This, however, would be false psychology. For a feeling presupposes some reality present to consciousness or contemplated in thought. Sugar is not saccharine because it is agreeable to the taste; it is agreeable to the taste because it is saccharine. So virtue is not right because it gives satisfaction; but it gives satisfaction because it is right. Vice is not wrong because it occasions remorse; it occasions remorse because it is wrong.

Moral feelings, whether motives or emotions, presuppose the knowledge of moral distinctions. If I am conscious of any motive to do right, I must first have an idea of right and some standard of judgment by which to distinguish right from wrong. If I feel remorse for wrong doing or complacency in right doing, these feelings presuppose knowledge of right and wrong. It is to be observed, however, that in the primitive regulative action of intuition before it is formulated or distinctly recognized in thought, the feeling and the intuition coexist. In this sense it is true that feeling is a kind of knowledge.

If the moral feelings arise before any knowledge of right and wrong, then, on account of the absence of that knowledge, there is nothing to distinguish them as moral; they are known merely as agreeable or disagreeable feelings; and the only generalization from them possible would be that some conduct is agreeable and other conduct disagreeable. And there would be no immutable distinction of right and wrong, but it would fluctuate with the feelings. This theory logically sinks back into the theory which derives the idea of right from happiness and thus loses it in the agreeable. Built on the unstable fluctuations of feeling, the theory can never attain a rational and immutable distinction of right and wrong.

This Hume perceived. Alluding to a passage in his *Treatise of Human Nature* (Book III. Part 1, Sect. 1,) in which he maintains that moral ideas originate not in the reason but in the feelings, he wrote to Hutcheson: "Is not this a little too strong? . . . I wish from my heart I could avoid concluding that since morality, according to your opinion as well as mine, is determined merely by sentiment, it regards only human nature and human life. . . . If morality were determined by reason, that is the same to all rational beings; but nothing but experience can assure us that the sentiments are the same. What experience have we in regard to superior beings? How can we ascribe to them any sentiments at all? They have implanted these sentiments

in us for the conduct of life, like our bodily sensations, which they possess not themselves."*

IV. Closely allied to the foregoing is Hutcheson's theory that moral ideas originate in a special mental faculty called the Moral Sense. This moral sense, however, when examined, is found to denote only the susceptibility to moral motives and emotions. These Hutcheson conceives of as analogous to the sensations of which we are conscious through the five senses. Hence the susceptibility to these moral motives and emotions he regards as a sort of additional sense, and calls it the Moral Sense. This theory is one of those which ascribe the origin of moral ideas to the feelings. Its calling these feelings a special faculty and naming it the Moral Sense, does not annul its identity with those theories nor exempt it from the objections which demonstrate their inadequacy.

I shall use the word conscience to denote the whole moral constitution, including both the capacity for rational intuition of right and wrong and for moral motives and emotions.

V. True ethics is distinguished from the theory that the distinction of right and wrong rests ultimately on the *will* of God. As eternal in Reason, the distinction of right and wrong and the law requiring the right are not originated by any fiat of will, human or divine. Law is eternal in God the supreme reason, and the will of God always acts in conformity with the law eternal in the Reason of God. God's will is his reason energizing. It is essential to all true and wholesome theology as well as to all true and wholesome ethics to recognize the absolute supremacy of reason, to recognize the universe as having its ultimate ground in reason and not in will. If will is supreme, morality and religion are no longer possible. The only basis for ethics would be the maxim that might makes right; the only object of worship would be an almighty power unregulated by reason, unenlightened by intelligence, and yet capricious because above all law, "*Monstrum horrendum, informe, ingens, cui lumen ademptum*,"—the most terrific being that the imagination of man can conceive.

Herbert Spencer says, "Religious creeds, established and dissenting, all embody the belief that right and wrong are right and wrong simply by divine enactment." Theologians "assert that in the absence of belief in a deity there would be no moral guidance; and this amounts to asserting that moral truths have no other origin than the will of God."† He here assumes that there is no way in which moral distinctions can depend on God except as they depend on a fiat of God's

* Life and Correspondence, by J. H. Burton, I. 119.

† Data of Ethics, p. 50, § 15.

will. It never occurs to him that the very reason why theologians affirm that the denial of God removes the foundation of moral distinctions, is that it is the denial of the supremacy of reason and the affirmation that the ultimate ground of the universe is not reason. Mr. Spencer however himself, as we have already seen, says that the belief in the "positive existence" of the absolute "has a higher warrant than any other whatever," "though the Absolute cannot in any manner or degree be known in the strict sense of knowing." Yet on the next page he declares that this Absolute is "an Incomprehensible Omnipresent power." Here then his own doctrine is analogous to that which he falsely charges on all theology. The Absolute Being which is the ultimate ground of the universe is known to be an omnipresent power, but we may not predicate of it intelligence. On this basis ethical distinctions must rest ultimately on irrational power, and the ethical ideas lose all their distinctive significance and give place to the ideas of the agreeable and profitable. And this substitute for Ethics is all that Mr. Spencer gives us in his ethical writings.

The doctrine that Law is in the Reason and is not the creation of will is as old in philosophy as Plato and Aristotle, who, however they differed in other respects, agree in recognizing the supremacy of reason and the dependence of moral distinctions on it. To the question, what is the distinctive character of actions and habits which constitutes them virtuous, Aristotle answers: "we can say at once that they must be according to right reason."* "We define virtue to be a habit, involving deliberate purpose, conforming to the relative mean, which is determined by reason (*λογος*) and as the man of good sense (*ὁ φρόνιμος*) would determine it. On either side of this mean, in excess or defect, lies vice." (B. II. chap. vi. 15, 16.) In defining what the chief good is, he says, it cannot be happiness merely, because men derive happiness from different and incompatible sources. He defines the chief good as determined by the standard of reason; "An active condition of the soul guided by or not without reason"; or more fully; "An active condition of the soul in accordance with its best and most perfect virtue (*ἀρετήν*) in a complete (or perfect) life (*ἐν βίῳ τελειῳ*).†" Therefore, though Aristotle teaches that virtue consists in attaining the highest good, yet his ethics is a system of intuitive morals having little in common with utilitarianism, because he determines what the highest good is by the standard of reason and declares the dependence of ethical distinctions on that standard. In the Euthyphro Socrates says that a quality or act "is loved by the gods because it is holy; it is not holy

* Nicomachean Ethics, Book II. chap. ii. 2.

† B. I. chap. vii. 14, 16.

because it is loved by the gods." (10.) And yet, though these philosophers deny that the will even of the gods can originate moral distinctions, Mr. Spencer classes them with Hobbes as teaching that moral distinctions are created by the enactment of the State.* This is the more surprising because Aristotle explicitly distinguishes in political ethics between that which is just by nature and therefore has everywhere the same force, and that which is enjoined by enactment; and notes with disapproval the opinion of some that the latter is the only just and unjust.† And Plato repeatedly argues against this error as held by Protagoras and others whom he mentions in different dialogues.‡

Christianity, in its historical revelation of atonement for sin through the humiliation and suffering of Christ, brings to the front the fact that law is neither created, annulled or changed by will, not even by the fiat of God's will; but that God's action in the forgiveness of sin must declare the immutability of law as really as in the punishment of transgressors. The only philosophy consistent alike with reason, with theism and with Christianity is that of Augustine, following Plato, which recognizes truth and law as eternal in God, the supreme and absolute reason. No fiat of God's will, no exertion of almighty power can make love to God and man to be wrong, or selfishness and malignity right. And this is no limitation of God; for it simply declares that God is perfect and absolute Reason, that his will is eternally in harmony with Reason, and his action eternally in wisdom and love. For will-power to change the moral law would be to subvert Reason and to annihilate God. God is Reason, not active and powerless, but energizing freely. God is will, not capricious, energizing in unreason, but a rational and reasonable will.

Some theologians, however, have missed the true philosophy and have taught that moral distinctions rest ultimately on the will of God. Conspicuous representatives of this error are Duns Scotus and Ockham in the Middle Ages, and Descartes in modern times.§ The error seems to have arisen in part from failing to distinguish between God's law, which in its principles is eternal in the reason, and God's government, which, in declaring and enforcing the law, is the action of will. It seems to have arisen in part from jealousy of infringement of God's

* Data of Ethics, p. 51.

† Nicomachean Ethics, B. V. chap. x. and B. I. chap. i.

‡ Thætetus 172, 177: Laws, B. x. 889, 890: Gorgias: Minos. Even the Autocrat in the Politicus, and in Laws, B. iv. 710, rules because he is the wisest and best of the people and in accordance with a science of government which regulates his entire administration.

§ Duns, Lib. I., Sentent. dist. 44; Ockham, Sentent. Lib. II., qu. 19; Descartes, Responsio ad sextas objectiones, 6; Works, Cousin's ed., Vol. II., pp. 348-355.

prerogative. It was argued that the dependence of moral distinctions on the will of God is essential to the freedom of the divine will; an argument which confounds freedom with arbitrariness and supposes a character unchanging in a right choice to be incompatible with freedom. It was argued by Descartes, "to him who considers the immensity of God it is evident that there can be nothing at all which doth not depend on him, not only nothing subsisting, but also no order, no law, no reason of truth and goodness." But he does not consider that truth and law, being eternal in God's reason, are as really dependent on God as what is created by his will. Leibnitz even suggests that in advocating this error Descartes was not in earnest. Theologians who held this error certainly did not intend to deny the universality, immutability and supreme authority of God's law; for the fiat of God's will which made it law they recognized as eternal and unchangeable. Thus Anselm said that the dictum that a thing is right because God wills it, is not to be understood as if in the case of God's willing anything wrong, as a lie, it would be right.* Duns Scotus, who accepted the logical consequence of the principle and taught that the just would be unjust if God willed it, yet admitted an unconditional necessity for the law of love as well as for everything which logically follows from the same. (Lib. III.) And Descartes held the inseparable identity of the will and the thought of God. It seems therefore to have been not a denial of the universality and immutability of the moral law in its practical bearing, but rather an hypothesis deemed necessary in certain venturesome speculations respecting the metaphysics of God's constitution, and involving an unwarranted abstraction of the divine will from the divine reason. Accordingly we find it used in later times as a philosophical basis for the supralapsarian doctrine of predestination.

It is greatly to be lamented that this error has ever found foothold in Christian theology, with which it is essentially in conflict. It cannot be held, even as a speculative theory, without distorting and vitiating both the theology and the practical teaching of Christianity. It has led to bald and hard presentations of theology, incompatible with the essential truth and spirit of Christianity and with the best thought and the best piety of the ages; and by the misrepresentations which it has engendered it is a hindrance to the reception of Christ and his gospel.

VI. True Ethics is distinguished from the theory that the principles of truth are eternal and universally regulative, but are external to and independent of God.

Some theists have been led into this error to avert the imputation of the skeptic that according to theism the principles of truth and right

* *Cur Deus Homo*, I. 12.

are created by a fiat of God's will. They concede to the skeptic that there is no other way in which these principles can be dependent on God; they fail to see that they are eternal in the absolute reason, and thus are dependent on God, although independent of his will, and law to it in all its action; and so they plunge into the abysmal error that truth and right have no dependence on God, but are independent and eternal in the constitution of things.

It is philosophically impossible that this theory should be true. The universe consists of concrete reality, not of abstractions; it is a universe of beings in their various modes of existence. All knowledge is the knowledge of being. The existence of truth, right, law, perfection, beauty or worth independent of any mind, is without meaning and impossible to thought. It is as meaningless and impossible as the existence of motion without a body moving and without force moving it. The rational cannot exist without a Reason or Mind, any more than the corporeal can exist without a body.

This theory nullifies the evidence of the existence of God. From our knowledge of reason in ourselves and in the scientific constitution of the material universe we infer that the universe is grounded in the personal God in whom as the Absolute Reason all truth and law, all ideals of perfection, and all norms or standards of good are eternal. This theory nullifies this evidence by declaring that all rational principles and laws, all rational norms of perfection and good are independent of any Reason or mind and are eternal in the constitution of things.

Not only does the theory nullify the evidence of the existence of God but it is itself the direct contradiction of theism; for it affirms that the universe is ultimately grounded in the impersonal, not in the personal. It thus concedes all that is essential in the theory of "creation by law"; for what is first and fundamental in the universe is law but not God. It coincides with monistic theories, materialistic or pantheistic, which explain the universe as the sum total of matter and its forces acting eternally according to unconscious law. It coincides with Spinozism which recognizes thought as one original attribute of substance, but it is unconscious thought. It coincides with Hartmann's "Philosophy of the Unconscious," which recognizes the revelation of rational intelligence everywhere in the universe, but it is in unconscious intelligence. It agrees with Hegel who puts thought before matter, but it is unconscious thought. Hegel however is more philosophical than this theory, for he starts with pure Being, while this theory starts with that meaningless abstraction, the constitution of the universe. As a theistic theory it is unphilosophical and inconsistent with itself. If we try to think of truth or law independent of mind in the constitution

of things, the essence of truth and law escapes and nothing remains but facts instead of truths and factual sequences instead of laws. It might still be possible to speak of what appears to be, but no longer possible to speak of what must and what ought to be; for all principles and laws of reason have subsided into phenomena; there is no standard of distinction between the true and the absurd, the right and the wrong, the perfect and the imperfect, the worthy and the unworthy. Thus the theory slumps into monism, materialistic or pantheistic, which knows no supreme being except the universe itself.

In reply the theist, who has fallen into this error, claims that the evidence of God's existence still remains, since there must be a being who has caused the universe to exist, and that he must be wise and good because he has caused it to exist in accordance with these principles and laws. Here, however, is evidence only of a power by which the universe exists and acts; and this power, for aught that appears, may be in the universe itself. There is no evidence of wisdom and goodness; for according to the theory, these principles and laws are eternal in the constitution of things, and if the universe exists at all it must necessarily exist according to its own eternal constitution, which is entirely independent of God.

Besides, the being who is thus supposed to bring the universe into existence is himself conditioned, and cannot be God, the absolute and unconditioned being. Rev. Dr. Fairchild says, "The principles of morality rest on the same foundation with those of mathematics and all necessary truths. . . . The moral law . . . exists in the nature of things . . . Of the modification of this doctrine, that obligation has its origin in the reason of God, it is only necessary to remark that reason does not originate principles or truths, it only perceives them already existing."* I may remark in passing that this author entirely misapprehends the doctrine which he so summarily sets aside. It is not the doctrine that principles or truths are originated by the divine Reason, but that they are in it eternal and without beginning. God knows them in himself as eternally "constituent elements of reason." This misapprehension exemplifies what I said, that theists are led into the error which I am controverting, by the impression that if truth and law are dependent on God they must have been originated or created by some definite divine act. But I return to the quotation.

The surprising doctrine here asserted is that the nature or constitution of things, that is, of the universe, exists eternal with no dependence on God; and that truth and law are eternal in it and independent of God. God, therefore, is always conditioned by this eternal and inde-

* Moral Philosophy, pp. 116-120, 143.

pendent constitution of the universe and by all the truths and laws that are eternal in it. If he creates or effects anything, he acts under necessity and can effect only that universe, the constitution of which already exists independent of him. He is thus conditioned under necessity in the exercise of his power.

He is also conditioned and limited in his knowledge. "Reason only perceives" the constitution of things and the principles and laws eternal in it "already existing." God acquires knowledge of the constitution of things and the principles inherent therein by perception and observation of what is external to and independent of himself. God then is conditioned and dependent both as to his power and his knowledge. He is merely a Demiurge who studies the constitution of the universe and its principles and laws and necessarily shapes the worlds in accordance therewith; because the eternal constitution of things makes it impossible to shape them otherwise.

Here also is abstraction carried to the utmost. I have criticised Spencer because, like a mediæval schoolman, he hypostasizes abstractions of human thought and feeling and deals with them as distinct entities. Here in like manner the nature or constitution of the universe is abstracted from the universe and conceived as eternal; the truth and laws dominant in the universe are abstracted both from it and from the supreme reason, which is God; and these abstractions are hypostasized as eternal, self-existent, independent entities, and presented as alone the unconditioned and all-conditioning ground of all that is. It is impossible to carry the hypostasizing of abstractions farther; and so long as theologians teach such theories of the universe we need not wonder that skeptics stigmatize theology as a tissue of abstractions.

On the contrary true theology, from beginning to end, deals always with concrete beings. The ultimate ground of the universe is the living personal God, eternal, self-existent, unconditioned and all-conditioning. In him as perfect reason all truth, all law, all ideals of perfection, all rational norms determining the ends worthy of rational beings are eternal. These are themselves "the nature of things" or the constitution of the universe, because they are the archetypes which, in his wisdom and love, God is progressively expressing in finite things; and therefore the universe in all its physical and all its rational systems is the continuous revelation of God. Whereas, according to the theory which I am criticising if carried out to its necessary logical inference, the universe is not a revelation of God, but only of its own constitution, in which all truths and laws are included, existing eternal and entirely independent of God; and the necessary inference is either Atheism or Pantheism.

In support of the theory that truth exists in the nature of things

independent of God it is urged that if God and all being were non-existent, space and time must nevertheless remain, and geometry and arithmetic would still be true. This is put forward in the quotation which I have been criticising and is the great argument in defence of the theory.

If in the non-existence of being space and time should remain, that does not prove that moral law is eternal independently of God.

But men deceive themselves by these violent suppositions of the non-existence of being. We are rational beings and all our thinking is under the rational laws of thought. By no intellectual somersets can we leap out of ourselves and our own rationality. Therefore, if we suppose ourselves to think away all being, we ourselves remain in the void and think there according to the necessary principles of reason. Then we infer that if no being existed, everything must be as we in the exercise of our reason must think it; and so space and time, geometry and arithmetic would survive. Whereas, if there were no being, there would be no reason, no difference between the true and the absurd, or the right and the wrong; and the mathematically impossible and all that reason sees to be absurd, would be just as possible as its contrary; for nothing would be, and nothing would be possible.

Hence in the non-existence of being space would be emptiness, a mere negation or non-entity; just as darkness is the absence of light and cold is the absence of heat. Knowledge and thought are impossible except as being is the object of the knowledge and the thought. Nothing is real except being, its modes of existence, and the rational truths, laws, ideals and ends which are regulative of it. It is impossible to have a thought which transcends all being, or which is not, directly or indirectly, a thought of being. In supposing that we know anything as to what would remain if all being were non-existent, we deceive ourselves. The very question is absurd, for it is the question, *if there were no being, what would be?* The only answer to this question is the entire cessation of intelligence. Space has no reality except as room for being. Room for being has no reality except as the possibility of being. The possibility of being is in God only.

Space and time are forms in which finite beings exist. They are not, as Kant teaches, subjective forms of sense in finite minds. To finite minds they are objectively real. But they are forms of finite reality which are archetypal and eternal in the absolute and divine reason. According to the constitution of the universe eternal in the divine reason, finite beings cannot exist except in time, or in both space and time. Subjective and objective are one in God in the sense that what is objective to us is first subjective in the archetypal thought of God. Schleiermacher says, "God's eternity is the absolutely timeless causality

of God, conditioning, with all that is temporal, time itself." "God's immensity is the absolutely spaceless causality of God conditioning, with all that occupies space (*allem räumlichen*), space itself."

There is, then, a real significance in Dr. Clarke's *a priori* argument for the existence of God from time and space, but in a way different from that in which he presented it. Space and time have no reality except as forms or constituent elements eternal and archetypal in the absolute Reason, and thus are forms of the existence of finite things.

We conclude that this theory of truth and law eternal in a constitution of things independent of God, is fatal to theism. All personal beings are autonomic. As man finds the law in himself in his own reason and conscience, so all truth and law are eternal in God, the absolute reason. No man can throw his thought behind God. God is the resting-place of the intellect not less than of the heart. All lines of thought converge towards God; all meet and stop in him; all spring again from him, made certain as real knowledge and effective as life-giving wisdom. When a thinker, audacious to soar beyond the limits of thought to its ultimate ground, imagines that he is soaring beyond God, suddenly, like Satan flying in chaos, he meets

"A vast vacuity; all unawares,
Fluttering his pennons vain, plumb down he drops
Ten thousand fathoms deep."

§ 38. The Formal Principle of the Law and the Real Principle.

I. The formal Principle of the Law declares the idea and significance of law. It is the rational intuition in which the idea of law arises, namely, *A rational being ought to obey reason*; or, *what is truth to Reason is law to will*. This is the statement of the principle in philosophy, where it appears in its most abstract form. In theology it would be, *Every rational being ought to obey God*; or, *The truth eternal in God, the supreme reason, is law to the action of all rational beings*.

The principle is formal in the active sense, *formative or constitutive*. When truth is known as related to the action of will, we know intuitively that we ought to obey reason. In this intuition reason sees the truth in the form of law, as imposing on the will obligation to act in conformity with the truth. This intuition of reason is the formal principle of the law, the principle which gives the distinctive idea and significance of law.

II. The real principle of the law declares what the law commands: *Thou shalt love the Lord God with all thy heart, and thy neighbor*

as *thyself*. All which the law commands is comprehended in this principle.

The formal principle declares the obligation to obey the law but not what the law requires. It tells us that every one ought to obey reason, or to obey God, but does not tell what reason or God requires. If by this principle we attempt to include all the virtues in a unity or to designate the one essential quality in all virtuous acts whereby they are all virtuous, we get only this, that they are all acts of obedience to law; in answer to the question, What does the law command? we have only the empty assertion, The law requires obedience to itself.

The real principle of the law answers this question; it declares that the law requires love to God and our neighbor. This is the essential quality of all virtues whereby they are virtuous; it includes in one principle all that the law requires. Specific duties are required by the law. But the specific commandments need not be considered here; for the law of love is the real principle which includes them all.

This distinction of the formal and the real principles of the law forces itself on the notice in every thorough discussion of ethics, and ethical writers have attempted to indicate it in various ways. President Hopkins, for example, gives us "The Law of Love and Love as a Law." The terms which I have appropriated to express it, seem to me better fitted for the purpose than any others.

We may use the words to discriminate actions. An action may be *formally* right but *really* wrong; as Paul's action in opposing Christianity was *formally* right because he acted with the recognition of the law and believed himself to be obeying it; it was *really* wrong because it was contrary to the real requirement of the law.

III. As declaring the reality and significance of law, the formal principle is indispensable to the law and to its practical efficiency.

1. It opens to us the range of thought peculiar to law, different from the agreeable, the profitable and the prudential, and different from the truth. It is like the opening of a new sense. It reveals a new world of reality. Without it we should have no knowledge of duty, or virtue, or authority or law. These words would be meaningless. It seems at first an empty principle; but it lies at the basis of all moral distinctions. Max Müller says: "There is no religion which does not say, 'Do good, avoid evil.' There is none which does not contain what Rabbi Hillel called the quintessence of all religions, 'Be good, my boy.'"* You laugh and say it means nothing. But it has a momentous meaning. It calls the boy away from passion and caprice to reason as his guide; it refers him to a law which declares an unchange-

* Science of Religion: Lecture IV.

able distinction between good and evil and sets him to studying what that law requires; beneath that command to be a good boy and giving it significance, is the law of God. Note the immense difference between an education which says "Be a good boy," and that which should say, "Be rich, my boy"; or, "Seek your own pleasure, my boy"; or "Never mind whether you are good or bad, my boy." The dawning of the knowledge of duty in a child's mind is like the dawning of the day.

2. The formal principle declares the real principle to be law. It is not mere advice to love God and your neighbor; it is not merely the didactic information that love is beautiful, agreeable or profitable. It is law, *Thou shalt*; it is law, declared by the authority of God and enforced by penalty for disobedience. Without this strength and authority of law, righteousness is displaced by the desire to please, virtue liquefies into a gush of feeling, and love is dissolved into mere amiableness and sentimentality.

3. It recognizes the important aspect of virtue as doing duty, as obedience to law, as subjection to rightful authority, as loyalty to government; and, on the part of the administrators of government, the enactment, maintenance and enforcement of just laws. Loyalty etymologically means fidelity to law. Loyalty to a person is a secondary meaning of the word, and is inferior in dignity to loyalty to principle and law. If the American people are loyal to the constitution and laws rather than to persons, it is because they have attained a higher grade of civilization and political culture. If, however, in losing loyalty to persons they have lost also loyalty to law and government, reverence for rightful authority and the very consciousness of subjection to it, they have sunk rather than risen in the scale of civilization. It is this sense of duty, this loyalty to law and authority which is asserted and emphasized in the formal principle of the law.

4. It also gives the important aspect of virtue as the harmony of the will with the reason, and the consequent harmony of the man with himself.

5. It gives also the important aspect of virtue as the harmony of man with God, and so with the constitution of the universe.

IV. As declaring the requirement of the law, the Real Principle is indispensable to the law and to its practical efficiency.

Without it the formal principle gives no information as to what the law requires.

Without it duty, if it could be known, would be done without love. Virtue would be mere obedience to a categorical imperative. But love is the fulfilling of the law. I obey God because I love him. I serve my neighbor because I love him. Christ recognizes love as the essence

of virtue. The sense of duty alone cannot rise to the sweetness, beauty, freedom and dignity of right character. Sir Thomas Browne presents a wholly inadequate conception of Christian duty when he says: "I give no alms to satisfy the hunger of my brother, but to fulfil and accomplish the will of God; I draw not my purse for his sake that demands it, but His that enjoined it; I relieve no man upon the rhetoric of his miseries, nor to content mine own commiserating disposition; for this is still but moral charity and an art that oweth more to passion than to reason."* At this point, also, Kant's Ethics is defective, grand as it is in its presentation of duty. He attempts to construct ethics from the formal principle of the law alone. The only motive which he acknowledges as purely moral, is the sense of duty desiccated from all feeling.

From the same error has arisen the belief that the greater the struggle in doing right, the greater the virtue; the more spontaneous, easy and joyous the right action is, the less its virtue. Whereas, the contrary is true; the greater the love, the greater the spontaneity and joy of the service, and the greater the virtue. Love in its perfection outstrips the sense of obligation and anticipates the categorical imperative of conscience.

And, in the issue, duty done merely in obedience to authority becomes debasing. Conformity merely to the formal principle of the law would be a submission to law in ignorance of what the law requires. It would be a blind submission to another's will, not an intelligent submission to Reason. It would be the obedience of a Turkish Janissary, as ready to do wrong as right, if so commanded.

In the moral education of a child it is necessary from its very helplessness that it be first taught submission to authority. Thus it learns that it does not live for itself alone; thus it is trained to the consciousness of duty, to obedience to authority, to the knowledge of the necessity of rendering service to others, and through this to the spirit of self-sacrificing love. It has been suggested by some profound thinkers that God proceeds in the same manner in training the human race in its infancy and childhood. Man is found first under a patriarchal government, in which the ruler is obeyed as the father of the clan or tribe. And thus, as the first step in moral development, man is taught the ideas of authority, law and obedience. And this accords with the proverbial maxim expressing the common sense of mankind, that no one is fit to command till he has first learned to obey.

But history as decisively proves that a training merely to unquestioning submission to authority is debasing and crushing, rather than

* *Religio Medici*, Part II., ii., pp. 116, 117.

ennobling and developing. Anthropologists tell of the slave kissing the hand that strangles him; of the savage, accused of a crime which he did not commit, not attempting to save his life by denying it; the consciousness of personality and personal rights had been entirely crushed out of them. And the child trained merely to unquestioning and unintelligent obedience is likely, at the first opportunity, to break away from all authority alike of man and of God.

It must be added that the will cannot consent to the formal principle of law otherwise than in the act of love to God and man which the real principle of the law requires. Moral education must train first to the consciousness of duty and obligation, and to obedience to law. But it must also give the knowledge that the obedience is not rendered to superior power, but to rightful authority; not to the caprice of arbitrary will, but to the behests of perfect reason; that the law obeyed is the truth of reason and the requirement of perfect wisdom and love; that the commandment is addressed to rational intelligence and the service required is a reasonable service, the service of universal love. Hence it is only in the act of love that the will consents to the formal principle of the law. And this is the teaching of Christian ethics. God, the Absolute Reason, sets forth the truths of Reason as the law to Will; in Christ he comes at once as lawgiver and redeemer, setting forth under human conditions his own obedience to the law in self-sacrificing love to bring sinners back to obedience; and in Christ he calls men to the duty and the exalted privilege of loving all men as God in Christ has loved them, and serving them as God in Christ, taking the form of a servant, has served them. The conception of virtue as the harmony of the will with Reason and with God is, as we have seen, important. But the will can come into harmony with Reason and with God only as we actually love God with all our hearts, and our neighbors as ourselves.

§ 39. Evidence that the Law of Love is the real Principle of the Law.

The question next to be considered is, how do we know that the law of love is the real principle of the moral law? How do we know that the law requires universal love?

What love is will be fully explained in a subsequent chapter. It is necessary, however, briefly to define it here, in order to give an intelligent answer to the question before us. The command of the moral law is addressed to man as rational free-will. The love which it requires is not natural affection; it is not emotion, or desire, or passion; it is the free choice of the supreme object of service. The law forbids a man to employ his energies supremely in serving himself; it requires him to

choose God as the supreme object of service and his fellow-man to be served as having rights equally with himself under the universal government of God.

I. As Christians we find this requirement of universal love in the laws of Moses, sanctioned as the all-comprehensive principle of the law by Jesus Christ. (Deut. vi. 5, Lev. xix. 18, Matt. xxii. 37-39). At present, however, I confine the inquiry to evidence aside from revelation.

II. The rational ground of the belief that the law requires love is the fact that every man is related to other rational beings in a moral system. Man finds himself intimately related to other persons in society; his own welfare and his sphere of achievement depend on their action, and theirs on his.

That man exists, not isolated but in a system, seems to be involved in the very act of knowing. Knowledge is the relation between a subject knowing and an object known. In the act of knowing I know myself not only as distinct from other beings, but also in relation to them; I look out on the outward world and know myself as a center of relations radiating in every direction and connecting me with other individuals. And further, in the knowledge of myself as a person, I know myself related to other persons in a rational system. And this is inherent in the very possibility of knowledge. Thus in the very act of knowing I know myself related to others in a rational system; and this relationship is the intellectual basis of the law of love.

Still further, in knowing the truths of reason as law to will, man knows himself in a moral system. He has intuitive knowledge of the formal principle of the law that a rational being ought to obey reason. In knowing himself rational man knows himself under the law of reason. He knows this law as universal, unchangeable, imperative, and of supreme authority, as the law of Reason supreme, absolute and eternal. He recognizes himself and all men on the same level as subjects of this common law, owing reciprocal duties to each other. Thus he finds himself in a moral system, owing duties and service to others under the law of reason equally binding on them all. He knows that in all his action bearing on another rational being he ought to consult the rights and interests of the other as really as his own.

Therefore we are not in a moral system because we are required to love one another; we are required to love one another because we are in a moral system. Love is required by the constitutive law of the system.

We have seen that moral law is distinctively law to free-agents in the

exercise of free-will. Now we find another quality distinctive of moral law; it is law to a free-agent in his action towards other free-agents. Law is properly called *moral* only so far as it declares the duty of a rational free-agent to a rational free-agent in a moral system.

It is evident that in such a system "no man liveth for himself;" a selfish life has no legitimate place. For the selfish life translated into thought would affirm the absurdity that the system and all the beings in it exist only to serve this selfish man. The maxim on which he selfishly acts, if made a universal law, would bring every man into deadly conflict with every other; human life would become impossible, and the social system would be destroyed.

III. The knowledge of existence in a moral system being presupposed, the knowledge of the real principle of the law is immediate and self-evident in rational intuition.

1. This intuition, that the law requires love to God and our neighbor, arises, like all others, on some particular occasion in experience and is practically operative before it is recognized and formulated in thought. When a man finds his own action affecting the interests of another person, and recognizes the fact that he and the other exist together in a rational system, he knows intuitively that he ought to respect the rights of the other equally with his own. The formal principle of the law, so soon as we recognize other rational beings with us in a rational system, carries us on to the knowledge of a reciprocity of duties and rights which involves obligation to reciprocity of love and service. This intuition is germinal in the virtual consciousness before it is recognized and formulated in thought. The law of love is not known in intuition completely formulated as Christ proclaimed it. Rational intuitions act in the concrete before they attract attention to themselves, and it is only by reflection on particular cases in which they have thus acted that we get the principle and the idea and formulate them in words. So it is with the law of love. It is known in intuition primarily in particular cases when, in acting with reference to another, the obligation is felt to regard his rights and interests equally with our own. From this *equality* the word equity is derived.

2. The application which any person makes of the law will vary with his own conception of the moral system to which he belongs.

When man knew himself only as a member of a clan, he was aware of obligations only to his clan. Having scarcely knowledge of the existence of men beyond a few neighboring clans, whom he knew only by their maraudings, it is not wonderful that he felt no obligations to regard their rights and interests. Hence arose the ancient sentiment which regarded a stranger as an enemy and treated him like a wolf. Says Cicero: "One whom we now call a foreigner (*peregrinum*) was

called by our ancestors an enemy (*hostis*).”* And Plautus says: “A stranger is to a man, not a man, but a wolf.”† Similar sentiments were long dominant in ancient civilization. The Phenicians and the Greeks conceived of the state as a city ruling the surrounding territory. The same was the Roman conception. Even in the times of the empire citizenship was theoretically citizenship of Rome. So long as man thus conceived of himself as identified with a small community, he recognized his obligations to that community and its members; others he regarded as natural enemies and conceived it right to conquer and enslave them.‡ In like manner, so long as a man identified himself with a caste or order, he recognized his obligations to those of his own rank, but absolved himself from obligations to others. The solidarity and fraternity of mankind, the obligation of every person to serve mankind, found slight recognition and never became a power in ancient civilization. Yet as the smaller communities were merged in larger states and men came more and more to know the countries and inhabitants of the earth, these great ideas make their appearance and the obligation of man to man as such is recognized. Max Müller says the word “mankind” never passed the lips of Socrates, Plato or Aristotle.§ Yet at a later period the Stoics had the idea of a city of the world, a commonwealth transcending all particular states. Cicero said: “For a man to detract anything from another and to increase his own advantage by the damage of another, is more against nature than death, poverty, grief, than anything which can happen to a man in body or estate. Nature prescribes that a man consult the interest of a man, whoever he may be, *for the reason that he is a man.*”|| Seneca says: “We are members of a vast body. Nature made us kin when she produced us from the same things and to the same ends.” “The world is my country and the gods its rulers.”¶ M. Aurelius Antoninus says: “My nature is rational and social; my city and country, so far as I am Antoninus, is Rome, but so far as I am a man it is the world. The things which are useful to these are alone useful to me.”**

3. The Law requiring love to God as supreme and to our neighbor as ourselves cannot be understood in all the significance of Christian Theism without considerable advance both in intellectual and moral culture. Its full significance presupposes the idea of the universe both

* De Officiis, B. I., c. 12.

† “Lupus est homo hominī, non homo, quum qualis sit non novit:” *Asinaria*, Act 2, scene 4, line 88.

‡ Plato, *Laws*, B. I., 625, 626.

§ Chips from a German Workshop, Vol. II., p. 5.

|| De Officiis, Lib. III., cap. V., 21, and cap. VI., 27.

¶ De Beneficiis.

** Thoughts, VI., 44.

as a Cosmos or unity and order of all material worlds, and as a moral system in which all rational beings exist. And, again, this presupposes an idea which the human mind was slow to attain, the idea of a universal religion, of one God, in their common relation to whom men of all nations and ages are brought into unity in a moral system. But even this idea of one universal system has its germ in the rational intuition that absolute being must exist; and in the intuitive knowledge of obligation, and therein of a law transcending myself and coming down from an authority above me, which is universal, unchanging, imperative and supreme. In whatever form man, in different stages of development, pictures to himself this authority, it is always the supreme.

4. We see that sin, which is the essential evil, consists in self-isolation. Buddhism regards the existence of finite beings as essential evil, because they are individuated, and in their individuality distinct from the infinite one; from this evil the only redemption is reabsorption into the infinite. Christianity, on the contrary, emphasizes the individuality, responsibility and dignity of personal beings, and sets forth their unity in a moral system under the law of love. Sin and evil arise when a person, by his own free choice, isolates himself from the system by choosing himself as his supreme object of service, and so puts himself into antagonism to both God and man and does what he can to mar the order and beauty of the system and to resist and annul its supreme law.

We see, therefore, that the law of love is essential in the rational constitution of the universe. God is love. We see also that man's knowledge of the law of love is rooted in his constitution as a rational being and asserts itself in its germinal and rudimentary form as an intuition of reason. Man is so constituted that, as his reason normally unfolds, he knows himself under law and knows that the law requires universal love.

IV. That man is constituted for subjection to the law of love is indicated in his emotional nature. 62-

He is constituted susceptible of both egoistic and altruistic motives and emotions. In babyhood the child yields almost exclusively to impulses tending immediately to its own sustenance and comfort. This is natural because in its helplessness it is dependent on others. But as it becomes capable of acting, the altruistic feelings appear. Affinity for others, the desire for their society, sympathy with their joys and sorrows, compassion for their distresses and the disposition to help them in their needs are spontaneous impulses of the human heart.

Both are essential to the well-being of the individual and of society.

Egoism alone disintegrates society and reacts in isolation and desolation on the egoistic individual. Altruism alone by leading the individual to neglect himself and his own business in order to help others, deprives him of the means of helping others and of the knowledge and power to help wisely and efficiently; and thus is fatal to both parties. Egoism and altruism are not contrary but complementary; each is essential to complete love to God and man.

Christianity recognizes both. It has been censured as requiring an exclusive altruism. The censure discloses a surprising ignorance. In the command, "Thou shalt love thy neighbor as thyself," Christianity recognizes the love of self as the measure of love to the neighbor. In approaching man with the remonstrance, "What shall it profit a man to gain the whole world and lose his own soul," it begins with trying to rouse him to a sense of his own highest and noblest interests and to induce him to seek wiser ends. It declares the worth of the individual man. It is Christianity which has revolutionized the ancient civilization, in which the individual was lost in the state and was the subject of no rights as toward the state but only of duties, and has compelled that recognition of the worth of the individual and the sacredness of his rights which has vitalized modern civilization and progress. And by making love the spring and principle of all duty, Christianity has made the service of others spontaneous and joyous, has opened in that service spheres of the noblest living, and made it possible in the most commonplace life to realize the highest ideals and to participate in the glory of heroic endeavor and the enthusiasm of a divine inspiration. In Christian Ethics Egoism and Altruism are not reciprocally exclusive but are complementary. As denoting respectively an exclusive selfishness and an exclusive regard to others they cannot be names of Christian virtues. Spencer regards them as essentially antagonistic and incapable of reconciliation in the present stage of man's evolution. Christianity reconciles love of self and love of our neighbor in the law of love, in which both self and the neighbor are recognized in their common relation to God the supreme lawgiver, and in the common love and service which they owe to him, the Father of all.

We have seen that the law of love is founded in the very constitution of society and also in the rational constitution of man. We now see that it has its roots in man's emotional constitution, in the natural motives which impel him to regard the interests and rights both of himself and of others, and the natural emotions by which he participates in the sorrows and the joys of his fellow-men.

V. That the law of love is supreme in the universe is verified by experience. It is thus verified so far as experience shows that the law is accordant with the constitution of society and the rational and emo-

tional constitution of man, and that obedience to it is necessary to the true well-being both of the individual and of the community.

1. The fact of the solidarity of mankind and the obligation of brotherhood involved in it are forced on the attention in all human relations and pursuits.

We must rescue men from uncleanness, disease, ignorance and vice or suffer therefrom ourselves. The uncleanness, vice and misery of great cities send abroad the germs of disease, and infest the community with robbers and murderers. The cholera on one of its desolating courses through Europe and America originated in the squalor and wretchedness of crowds of pilgrims in Mecca. Facts like these are ghastly declarations from the outcasts of society, "We are brethren, though you heed us not;" they are revelations of the unity of man and of that fundamental fact of human society that if one member suffer all the members suffer with it. Society must remove ignorance, vice and misery or be poisoned by it. The obligation to obey the law of love is inherent in the constitution of society.

On the other hand the health, virtue, intelligence of any is conducive to the welfare of all. If all Africa were filled with a civilized and prosperous people it would stimulate the business and multiply the gains of all mankind. The nations long acted on the false principle of political economy that a nation advanced its own industrial interests by crippling the industry and hindering the gains of others. Now they are coming to understand that the prosperity of a nation is promoted by the prosperity of all others.

This interdependence of men reveals itself in the relations of individuals. Man's thoughts and feelings are continually directed towards others. The organic relations reveal themselves persistently; in good will and friendship it may be, if not in envy, jealousy and hate. Says Teufelsdröckh, "In vain thou deniest it; thou art my brother. Thy very hatred, thy very envy, those foolish lies thou tellest of me in thy splenetic humor, what is all this but an inverted sympathy. Were I a steam-engine wouldst thou take the trouble to tell lies about me? Not thou! I should grind all unheeded whether badly or well."*

Thus the solidarity of man forces itself on the notice as a fact. It is not a sentiment nor the creation of a sentiment; it is the fundamental fact of human existence. And as this great fact looms upon our notice, the obligation of each to consult the rights and welfare of every other, the obligation of each individual to consult the rights and welfare of society, and the obligation of society to consult the rights and welfare of each individual, become apparent. And this is the law of love; not

* Carlyle, *Sartor Resartus*: B. III., Ch. 7.

a sentiment, but an eternal truth; not a truth in the thought of an individual merely, but a truth which declares at once the fundamental constitution of the individual and the fundamental constitution of society. If a man puts himself in antagonism to this constitution of things, with its law of love, in order to escape it, he is in every action confronted by humanity and can escape it only by suicide. If he puts himself in antagonism to it in order to promote his own interest, his action, if effectual, would disorganize society and destroy his fellow-men, that himself might be all; and to this result selfish action always tends. "Whosoever hateth his brother is a murderer."

And this is analogous to the material universe. The very idea of a universe or cosmos implies in it an all-comprehending plan and continuous action towards an end. In the lower spheres of life it works as instinct; in inanimate nature, as final cause. Nothing in it is good in itself except as it imparts its energy and carries onward the plan of the whole. So it is in the moral system. Every being has significance not for himself alone, but also for others; and these are inseparable. Says I. H. Fichte: "The more a being fulfils its end in reference to the all, the higher does it advance its own well-being. He most certainly overcomes the world who rightly serves it. He obtains from it the highest blessedness, who most faithfully imparts to it his own endowments."*

2. The fact that obedience to the law of love promotes the highest good of the individual and of society has been verified by experience. The common sense of mankind declares this conclusion in the maxim, "Honesty is the best policy." Positivism declares the same conclusion in the altruism of Comte.

From the observation of the course of the universe and of human history the evolutionist also reaches the conclusion "that the real nature of the universe is such that it warrants on our part unlimited love and absolute trust . . . that the highest moral nature is nearest in accord with the truth of things."† Matthew Arnold, from the side of rationalistic skepticism, reaches the same conclusion: "If there is a lesson which in our day has come to force itself upon everybody, in all quarters and by all channels, it is the lesson of the solidarity of men. If there was ever a notion tempting to common human nature, it was the notion that the rule of 'every man for himself' was the rule of happiness. But at last it turns out as a matter of experience, and so plainly that it is coming to be generally admitted, . . . that the only real happiness is in a kind of impersonal higher life, where the happiness of others counts with a man as essential to his own. He that loves his

* Theistische Weltansicht, Abschnitt IV., §§ 61-64.

† Man's Moral Nature, by R. M. Bucke, M. D., pp. 199, 200.

life does really turn out to lose it, and the new commandment proves its own truth by experience. . . . Jesus Christ and his precepts are found to hit the moral experience of mankind, to hit it in the critical points, to hit it lastingly; and when doubts are thrown upon their really hitting it, then to come out stronger than ever. And we know how Jesus Christ and his precepts won their way from the very first, and became the religion of all that part of the world which counted most, and are now the religion of all that part of the world which most counts. This they certainly in great part owed, even from the first, to that instinctive sense of their fitness for such a service, of their natural truth and weight, which, amid all misapprehensions of them, they inspired.* The same conclusion he expresses in his famous declaration that he finds supreme in the universe "a stream of tendency, the eternal, not ourselves, which makes for righteousness."

3. The theory that man's blessedness must be sought in a life of selfish acquisition and in the gratification of selfish desires, issues in Pessimism. For the desires grow by what they feed on; and the more a man devotes himself to acquire the objects to which they impel him, the hotter will the fever of desire rage and the more restless he will toss under its dry and consuming heat. On this theory, Schopenhauer, Hartmann and Leopardi are right in their conclusion that life is not worth living and that the best boon to man is the extinction of his being. Pessimism is a *reductio ad absurdum* of this theory of human life.

VI. That the law of love is the universal and supreme standard of morals is confirmed by the common consent of mankind.

1. The obligation to regard the rights and welfare of others is practically felt in the conscience common to mankind before it is recognized and formulated.

This cannot be proved by the examination of every human being, but is inferred from facts characteristic of humanity.

It is implied in the fact that everywhere and always man exists in society organized under civil government. Man is in society; civil government is necessary to declare and enforce the duties of man to his fellow-men and to society, and to protect the rights and interests both of the individual and of society.

It is also evident in the fact that man can communicate with man everywhere on moral subjects. Wherever man travels he appeals to the same moral sentiments and is understood. We understand the moral teachings of the ancients. The self-sacrificing love of Christ is admired wherever it is known.

* Last Essays on Religion, pp. 21, 23, 24.

Eloquence is impossible in behalf of injustice, oppression, hatred, as such. If they are defended it must be under the guise of virtue. Hence arises the maxim of some Rhetoricians, "Eloquence is a virtue." Theremin says, "Eloquence, in all its various forms, is nothing but the development of the moral impulse itself."*

It is also evident in the fact that everyone feels it a protection to be near human homes and in the presence of men pursuing their ordinary business. It is in solitary places and the concealment of night that one fears the assaults of revenge, cupidity or lust.

2. The law is recognized by thinkers of various classes whose fundamental principles it contradicts. Comte in his *Ethics and Sociology* gives us the law of Altruism. In this, though the name altruism is inadequate, he recognizes essentially the law of love to man. This is the more remarkable because it is incompatible with his theory of knowledge. In his sociology Comte regards the individual as a member of society, as a single cell is part of an organism. From this conception he develops his ethics of altruism. And he so carries it to an extreme that he revives the ancient heathenish conception that the individual is so an organic part of society that he only owes to it duties and has in respect to it no rights; while society owes to the individual no duties and has in respect to him only rights. The theory of knowledge on which Comte here rests his altruism is a sort of materialistic realism; man knows himself in the organic solidarity of the race. But this is in direct contradiction to pure phenomenism, the theory of knowledge which he lays at the foundation of his Positive Philosophy. This theory rests on sheer individualism; the material of knowledge is only the impressions made on the sensorium of an individual; and the utmost range of thought is to unite these impressions by resemblances and to co-ordinate them in uniform sequences. Knowledge is thus shut up within the subjective states of an individual. Comte unconsciously bursts through the limits of his own theory of knowledge in constructing his ethics of Altruism. In so doing he proves that man is so constituted that some glimpse of the law of love must force itself on every student of man and society, in spite of theories of knowledge incompatible with it. On the other hand it proves the falsity of Comte's theory of knowledge, since it is incompetent to give the law of love which is grounded alike in the constitution of the individual and of society.

Another example is found in the ethics of Evolution. The law of the survival of the fittest is, according to this theory, a fundamental law of all organic life. It is the law of all life that the strong crowd out

* Rhetoric, Book I. chap. iv.

the weak; every creature superior in any particular to another, uses its superiority to wrest from the inferior its goods and to appropriate them to itself. The only principle of ethics derivable from this theory is the principle that might makes right. Yet evolutionists teach ethics founded on the law of love. They even claim that in denying existence after death they set forth a purer and more disinterested love than Christianity with its endless rewards of virtue can present. Mr. Spencer regards the selfish aggressiveness of individuals and the marauding, belligerent and subjugating spirit of the race as legitimate and necessary results of evolution. But he teaches that the evolution is carrying man beyond this into a social state of sympathy and co-operation, in which ultimately man will find his own pleasure in promoting the pleasure of others; altruistic feelings will become so dominant that the man will forget his own pleasure in the pleasure of serving others; and self-denial will be transfigured into self-gratification.* But if the fundamental law of evolution in living beings, that the strong crowd out the weak, by its own action transforms itself in man's development into the law of self-sacrificing love, certainly some power above nature reveals itself in man, and a rational and spiritual law comes into sight, which is above nature's laws and directs them to its spiritual ends. And this law is the law of love.

Mr. Spencer says, "That these conclusions will meet with any considerable acceptance is improbable. Neither with current ideas nor with current sentiments are they sufficiently congruous."† In several of the closing chapters of his *Psychology* he considers the relations and the antagonism of Egoism and Altruism, and finds no clear and satisfactory way of harmonizing them. But by looking into the New Testament he could have found a broader and clearer statement of the law of love, which sets forth the harmony of Egoism and Altruism in a way clear from all his difficulties; and would have found, predicted by Hebrew prophets and by Christ and his apostles, the realization of that reign of love which he anticipates as the destined happiness of mankind. Yet he goes out of his way to assail Christianity with spiteful misrepresentations, and in his whole volume of the *Data of Ethics* recognizes the excellence of Christian morality no further than in this grudging acknowledgment: "There are some, classed as antagonists to the current creed, who may not think it absurd to believe that a rationalized version of its ethical principles will eventually be acted on."‡ Here the fact that evolutionists, in teaching ethics, are obliged to go right in the teeth of a fundamental law of evolution, reveals at once the impos-

* *Data of Ethics*, Chap. xiv.: *Biology*, Part VI. Chap. xiii.

† *Data*, p. 257.

‡ *Data of Ethics*, § 98.

sibility of escaping the acknowledgment of the law of love and the inadequacy of evolution to explain man's rational and moral life.

Another example is found in the sophists of ancient Greece. They grounded virtue in pleasure, and thus destroyed the very ideas of obligation and law and all that is distinctive in the idea of virtue. And yet they taught that virtue consists in promoting the welfare of the state, in supporting and advancing the commonwealth. This idea of virtue may spring from Kant's principle of Ethics: "So act that the maxims of thine own action may also be the principle of a universal law."* It may spring from any principle which finds the ground of ethics in man's rational constitution and in the constitution of society as a rational or moral system. But it is entirely foreign from the ethical principle of the sophists and could never have been developed from it. Like the Positivists and the Evolutionists, the Sophists found the intuitions of their own reason and the necessity of regarding society in its essential constitution as a moral system, stronger than their own theories.

3. Men who doubt or deny the truth of Christianity and even of Theism now admit that the law of love has been commonly acknowledged in the theology, philosophy and literature of mankind.

Mr. Buckle says: "There is unquestionably nothing to be found in the world which has undergone so little change as those great dogmas of which moral systems are composed. To do good to others; to sacrifice for their benefit your own wishes; to love your neighbor as yourself; to forgive your enemies; to restrain your passions; to honor your parents; to respect those who are set over you; these and a few others are the sole essentials of morals; but they have been known for thousands of years, and not one jot or tittle has been added to them by all the sermons, homilies and text-books which moralists and theologians have been able to produce. . . . In reference to our moral conduct, there is not a single principle now known to the most cultivated Europeans which was not likewise known to the ancients. . . . That the system of morals propounded in the New Testament contained no maxim which had not been previously enunciated, and that some of the most beautiful passages in the apostolic writings are quotations from pagan authors is well known to every scholar, and so far from supplying, as some suppose, an objection against Christianity, it is a strong recommendation of it, as intimating the intimate relation between the doctrine of Christ and the moral sympathies of mankind."† The misstatement of facts in this passage must be "well known to every scho-

* *Grundlegung zur Metaphysik der Sitten*, Abschnitt II., p. 47.

† *History of Civilization*, Vol. I., 129, 130.

lar ;" yet it is an acceptance of the Christian doctrine that there is for mankind one and the same universal standard of morals. The New Testament sets forth the law of love as declared in the Pentateuch and reiterated by Christ, as a universal law for all mankind. Paul explicitly declares that this law is known by the heathen through the reason or conscience common to all men, and is the ground of their guilt, though they had not knowledge of the revelation of the law through Moses and through Christ.* Christian theologians and moralists have taught with Paul the existence of this common standard or law of morals grounded in the very constitution of man and more or less clearly known to all mankind. This position they have long been obliged strenuously to defend against skeptical writers who have denied it, and who have urged various arguments to prove that different nations and ages have different standards of moral action or else are entirely destitute of moral ideas. Lately a great change has taken place. The passage just quoted from Buckle, with the exception of his candid admission at the close, represents the general drift of recent thought on this subject on the part of opponents of Christianity. Christian thinkers welcome this as a concession of the position which intelligent theologians and moralists have held and strenuously defended as the true doctrine of Christianity.

The fact that the recognition of the law of love is not peculiar to the teachings of Christ, has been urged as an objection against Christianity. It has force, however, only against Christianity falsely conceived. At times principles of a false rationalism have influenced theological thinking. This was eminently the case in the defence of Christianity against the English deists in the last century. The apologists seemed to regard Christianity as a system of philosophy and ethics. So regarding it, their "internal evidences" consisted mainly in proving that Christ taught a system of ethics purer than any that had ever been taught before. This evidence fails so soon as it is shown that the fundamental principle of the law as taught by Christ is not peculiar to his teaching, but is grounded in the constitution of man and has been generally recognized by ethical thinkers in every age. How far skeptical writers have been led to their new position by discovering this weak place in those defences of Christianity and mistaking it for a weakness in Christianity, and thus flattering themselves that they were giving Christianity itself a deadly and final thrust, I cannot say. But in reality they have conceded to Christianity a most important point. It is not merely, as Buckle puts it, the concession that Christianity accords with and is rooted in the universal moral sympathies of mankind ; it

* Rom., chap. I. and II.

also calls attention to what is the distinctive and essential characteristic of Christianity. Christianity is not distinctively and essentially philosophy, doctrine, law or ethics; it is God's action in human history redeeming man from condemnation and from the power of sinful character, renewing him to the life of love in which he comes again into harmony with the law which he had broken. Redemption presupposes the knowledge of law and the consciousness of sin. Christianity is not a revelation of law but of God's spiritual power in Christ and the Holy Spirit, acting in human history and making the law effectual to realize in man that love which out of Christ the law had commanded only to be disobeyed. According to this conception of Christianity, the fact that the law of love has been the common standard of morals to mankind is not an objection to it, but rather a confirmation of its truth. Christianity is not doctrine and ethics, but life and power. In the words of Minucius Felix, "*Non eloquimur magna, sed vivimus.*" It must be added that caution is necessary in estimating the representations of this subject now commonly made. The representations of the coincidence of heathen ethics with Christian are exaggerated. Fine sentiments and true principles scattered in isolation here and there are gathered from all heathen literature and presented as one system; from the knowledge of Christianity a meaning is sometimes interpreted into them which their authors did not apprehend; the inconsistent and immoral teachings and practices of the same writers are overlooked; and no notice is taken of the imperfect conception of the meaning of the law and of the extent of its application in the ages when man had not yet grown up to the conception of the solidarity of mankind in a moral system. And these fragmentary fine sentiments winnowed from the chaff, are brought together as heathen morality and compared with the morality of the New Testament. It is also impossible to avoid noticing in many of these writers, who of late have been eulogizing heathen morality, an obtrusive partiality for heathenism; a delight in expatiating on the beauty of its sentiments and unfolding it in its most favorable light; with a grudging and niggardly acknowledgment of the excellence of Christianity, a surly disposition to depreciate its worth, and frequently either an amazing ignorance or a willful misrepresentation of its ethical teachings. No system of morals ever taught in heathenism will compare in comprehensiveness, simplicity, clearness and practical applicability and power with that of Christianity. The best teachings of all heathen literature combined, after all attendant errors have been eliminated, do not constitute an ethical system equal in completeness, simplicity, purity, clearness and power to the law of love as taught by Christ; as exemplified in the self-sacrificing love of Christ's humiliation and his earthly life and death; and as thus declared to be the

fundamental and constitutive law of the universe, at once the law of God and the law of man. The principle which should guide us in this comparison was well expressed by Lactantius: "No sect and no philosopher has ever been so far astray as not to know something of the truth. So that if there were any who should collect all the truth scattered among individual philosophers and different sects and reduce it into a system, he indeed would not differ from us. But this no one can do unless he is learned and also skillful in discriminating truth."*

4. That the law of love has been recognized by the common consent of mankind is confirmed by scholarly investigation of the religion, philosophy and literature of the world.

I shall attempt no more than to notice a few examples. Buddha says: "Religion is nothing but the faculty of love."† Buddhism recognizes the law of universal self-sacrificing love in the life of Siddhartha Gautama its founder; in its two foundation principles, self-conquest and universal charity; and in its principle that evil consists in individualism. Through the last principle comes in the pessimism which infects the whole system with deadly poison. Evil consists in individuation; this is true. But the Buddhist inference is, Man is an individual; therefore his very constitution is evil; he can escape evil only by absorption into the all, losing his individuality and his conscious being at once in Nirvana. What a pitiful conclusion for a system which has so much that is true and noble. How immeasurably superior is Christianity. Christianity also teaches that individuation is evil, meaning by individuation, isolation in selfish egoism. But according to Christianity the evil does not inhere in the constitution of the man. Man's dignity is in his personality whereby he is capable of knowing and serving God and of loving all as God loves all. He is also in his nature a member of a race, and in his personality a member of a rational and moral community. In coming into harmony with God and with both the natural and the rational systems through love, he realizes, not the extinction, but the development, perfection and blessedness of his being. And in the self-sacrificing life of its founder and its principles of self-conquest and universal love, Christianity is far from being inferior to Buddhism.

Sir William Jones cites "the beautiful Arya couplet," which was "written at least three centuries before our era," and which pronounces the duty of a good man, even in the moment of his destruction, to consist "not only in forgiving, but even in a desire of benefiting his destroyer, as the sandal-tree in the instant of its overthrow, sheds per-

* Inst. Div. Lib. VII. Cap. vii.

† Lillie's Buddha and Early Buddhism, p. 147.

fume on the ax that fells it." He cites similar sentiments from Mahometan poets of Persia; "The verse of Saadi who represents a return of good for good as a slight reciprocity, but says to the virtuous man, 'Confer benefits on him who has injured thee;'" also the fanciful comparisons in the verses of Hafiz, the poet of Shiraz:

"Learn from yon orient shell to love thy foe,
And store with pearls the hand that brings thee woe.
Free like yon rock from base vindictive pride,
Emblaze with gems the wrist that rends thy side;
Mark where yon tree rewards the stony shower
With fruit nectareous or the balmy flower:
All nature cries aloud: shall man do less
Than heal the smitten and the railer bless?"

In closing his remarks on this subject he says, "My principal motive was to give you a specimen of the ancient oriental morality which is comprised in an infinite number of Persian, Arabic and Sanscrit compositions."*

The principle of the Golden Rule is expressed in various forms by Herodotus, Thales, Pittacus, Lysias, Isocrates, Diogenes Laertius, (who cites it as an expression of Aristotle), Seneca, Ovid, Terence, Epictetus and Marcus Aurelius Antoninus. It has commonly been said that Confucius gave it only in the negative form. But Prof. Ezra Abbot has shown that he has given it both in the negative and the positive forms.†

It is to be noted that, while ancient writers set forth the Golden Rule, they do not commonly set it forth as the action or expression of the heart's love to man, nor recognize its essential connection with love to God. This is not surprising, however, since it is only when man comes to know the one only God, and thus attains the conception of a universal religion, that he comes to know the solidarity of the human race in one moral system, and thus is able to appreciate the deeper grounds of his interest in man in their common relation to God as their father. Herein we see the great superiority of the ethics of Jesus Christ, who teaches that man's duty to man is inseparable from his duty to God, and can neither be understood in its true significance nor practised in its true spirit apart from his duty to Him.

Plato, however, recognizes this relation and teaches that our duty is determined by our membership in the moral system under the government of God. "The ruler of the universe has ordered all things with

* Discourse XI. before the Asiatic Society. *The Philosophy of the ancient East; Works*, Vol. III. pp. 243, 245. London, 1807.

† *Journal of the Am. Oriental Soc.* Vol. IX.

a view to the preservation and perfection of the whole, of which each part has its fitting action and passion, and every minutest action and passion of each part to the last fraction has its appointed supervision. Of these parts one is thine, stubborn youth, which, however little, always influences the whole. You forget that this, and everything that comes into being, exists for the whole, that the whole may be blessed. You exist for the whole, not the whole for you."*

To the same purport is the discourse of Epictetus. "If what philosophers say of the kinship between God and men be true, what has any one to do but, like Socrates, when he is asked what countryman he is, never to say that he is a citizen of Athens or of Corinth, but of the universe. For why, if you limit yourself to Athens, do you not farther limit yourself to that mere corner of Athens where your body was born? . . . He who understands the administration of the universe and has learned that the principal and greatest and most comprehensive of all things is this vast system extending from men to God; and that from him the seeds of being are descended, not only to one's father or grandfather, but to all things that are produced and born on earth, and especially to rational natures, as they alone are qualified to partake of a communication with the Deity, being connected with him by reason; why may not such a one call himself a citizen of the universe? why not a son of God?"†

So also Plutarch: "It is not so much noble to confer benefits on those who love us as ignoble to refrain from doing so; but to pass over an occasion of revenge, to show meekness or forbearance to an enemy, to pity him in distress, to bring help to him in need, to assist his sons and family if they desire it, any one who will not love this man for his compassion and commend him for his charity, must have a black heart made of adamant or iron, as Pindar says."‡

Cicero also recognizes the basis of law in reason and its origin in God: "Right reason is the true law, congruent with nature, universally diffused, unchanging, everlasting; which imperatively commands to duty and forbids fraud; which, nevertheless, while it requires rectitude, leaves me free to obey or to disobey. No authority exists to repeal this law, or to detract anything from it, or to enact any law contrary to it. Neither by the Senate nor the People can we be absolved from our obligation to obey it. Nor is there any authoritative expounder of the law other than itself. Nor will there be one law in Rome, another in Athens, one law now, another hereafter; but one everlasting and

* Laws, Book X., 903.

† Discourses, Book I., chap. 9, Higginson and Carter's Translation.

‡ On Receiving Profit from Enemies, 9.

undying law will hold together all nations in all time, and will be the one common master, as it were, and commander of all. It is God who is the author, the judge and the enactor of this law. He who will not obey it must flee from himself and spurn the nature of man; and herein he will suffer the severest punishments, even if he escape other inflictions commonly regarded as penalties."*

Of the divine origin of law the Chorus in Sophocles' *Œdipus Tyrannus* says (864-873): "Oh that the Fate may favor me in reverent purity of word and deed, commanded by laws fixed on high, the offspring of the heavenly Aether, of which Olympus alone is the father, which are not the offspring of the mortal nature of man, nor does forgetfulness ever put them to sleep. The great God is in them and never grows old. Lawless and violent caprice begets the tyrant." Of the ancient Egyptian ethics M. Chabas says: "None of the Christian virtues is forgotten in it; piety, charity, gentleness, self-command in word and action, the protection of the weak, benevolence towards the humble, deference to superiors, respect for property, . . . all is expressed there."†

VII. It remains to consider some objections.

1. It is objected that there is no agreement in the moral sentiments of mankind. Practices which are regarded as praiseworthy in some ages or countries, are condemned as crimes in others. The answer is that there is an agreement in the principle by which these conflicting acts are justified. They who justify slave-holding argue that it is best for the slave and best for freemen; that it is essential in the best constitution of society. Their arguments are appeals to the law of love, just as really as are the arguments of those who condemn it. Hindoo women cast their children into the Ganges. They justify it by saying that we ought to give our most precious things to God, and that the sacrifice insures the eternal felicity of the child and of the mother; thus they appeal to the law that we should love God with all our hearts and our neighbor as ourselves. The rumseller justifies his business by reasoning that he must provide for his own family; that alcoholic drink is beneficial; that its licensed sale causes less drunkenness than its prohibition; he appeals to the law of love. In these and all similar cases the difference is not as to the supremacy and obligation of the law of love, but as to questions of fact.

It must be further considered that the same outward act which in some cases truly expresses regard for the rights and welfare of others, may in other cases violate their rights and hinder their welfare. Pa-

* *Fragmenta: De Republica*, Lib. III.; *Opera*: Boston, 1817, Vol. XVII., pp. 185, 186.

† Quoted Renouf's *Religion of Egypt*, p. 74; see 74-80.

rental love sends the child when healthy to school, but when sickly keeps it at home. Our Saviour teaches that in a rude state of society a custom may be left unopposed, because society must make further moral progress before it can understand the evil and develop a wise and effective opposition.*

2. It is also objected that savage races have been found entirely destitute of moral ideas and of knowledge of moral distinctions.

If so, they are but children of a larger growth. The objector overlooks the facts that principles are constitutional norms, not inborn ideas; that they presuppose a certain development of the being and some occasion in experience before they influence action: and that they practically influence action before they are recognized or formulated in reflective thought. The fact that a child or a savage denies all knowledge of the difference between right and wrong is entirely compatible with the influence of moral motives and action under their influence, which would reveal the moral nature to any intelligent observer.

No evidence sufficient to establish the fact alleged by the objector has ever been adduced. Travelers are commonly untrained to scientific observation and ignorant of the savages' language; they found their conclusions on a brief and superficial acquaintance. Their testimony also is merely negative, to what they have not observed, not to any facts positively incompatible with the existence of moral motives and emotions. Even missionaries who have dwelt among savages may deceive themselves by demanding a kind of evidence not necessary to prove the fact and, in the circumstances, not to be expected. Thus Mr. Moffat denied that the inferior tribes of South Africa had any moral sentiments. Yet in the same volume he relates that one of these natives came to him in great indignation because one of his tribe had stolen his cattle, and dwelt on the aggravation of the offence by the fact that the thief was one whom he had recently helped and befriended in a time of distress. All this is palpable evidence of moral feeling, though Mr. Moffat was not intelligent enough to perceive it.† We have also the testimony of specialists of high authority in anthropology. Quatrefages says: "Confining ourselves rigorously to the region of facts and carefully avoiding the territory of philosophy and theology, we may state without hesitation that there is no human society or even association in which the idea of good and evil is not represented by certain acts regarded by the members of that society or association as morally good or morally bad."‡ Tylor, the author of "Primitive Culture,"

* Matt. xix. 7, 8.

† Moffat's *Missionary Labors and Scenes in South Africa*.

‡ *Human Species*, p. 459, Appleton's Ed., B. X., chap. 34.

says: "Glancing down the moral scale among mankind at large, we find no tribe standing at or near zero. The asserted existence of savages so low as to have no moral standard is too groundless to be discussed. Every human tribe has its general views as to what conduct is right and what wrong, and each generation hands the standard onwards to the next. Even in the details of those moral standards, wide as their differences are, there is a yet wider agreement throughout the human race."*

* *Contemporary Review*, April, 1873. See the same conclusion in Tylor's *Primitive Culture*, Vol. I., pp. 219, 386; Sir Henry Maine's *Village Communities*, p. 17; Renouf's *Religion of Ancient Egypt*, pp. 130, 131.

CHAPTER X.

THE PERFECT: THE THIRD ULTIMATE REALITY KNOWN THROUGH RATIONAL INTUITION: THE NORM OR STANDARD OF THE CREATIONS OF THOUGHT AND THEIR REAL- IZATION BY ACTION.

§ 40. Origin and Significance of the Idea.

THE idea of the Perfect arises when we think of an object as constituted in accordance with the truths and laws of reason, and as thus being in its constitution an expression of these truths and laws. I have the idea of a circle as a portion of space inclosed by a line, all the points of which are equally distant from a point within called the center. If I think of a line actually drawn in exact accordance with this idea, I think the figure thus described must be a perfect circle. If I think of a steam-engine constructed in exact accordance with every law regulative of such a structure, I must think of it as a perfect steam-engine.

The idea of the perfect implies a rational standard within the mind, accordance with which is perfection. Without such standard the idea of perfect and imperfect could not arise; the mind would have no idea for the words to express. Objects might be compared as large or small, agreeable or disagreeable, useful or noxious, but not as perfect or imperfect.

This rational standard is possible only because we have knowledge through rational intuition of the truths and laws of reason. The Perfect, therefore, denotes a new reality, our knowledge of which depends on rational intuitions.

This is the norm or standard of the creations of thought and their realization by action, in nature and in art, in growth and in construction, in character and institutions. By it we judge as perfect or imperfect a rose and a watch, a solar system and a steam-engine, the character of an individual and the institutions of society.

§ 41. Ideals.

I. When the mind imagines a perfect object, that creation of the imagination is called an ideal.

I have distinguished imagination and fancy. When the mind in its creation proceeds in harmony with rational truth and law and thus expresses the deepest reality and true perfection of the object, the creative power is called the imagination and its product is an ideal. When the mind creates capriciously, without regard to truth, law and reality, the creative power is called the fancy and its product is a conceit or fancy.

II. In creating its ideals the imagination uses only the material given in perceptive intuition, but combines it in accordance with the principles and laws of reason. Cicero says Zeuxis had five of the most beautiful women of Crotona as models from which to make up his ideal of perfect beauty.*

Ideals are not obtained by copying observed objects. The qualities of observed objects are used as material; the ideal is attained, not by imitation but by creation.

The ideal thus created may be itself imperfect, that is, not the true ideal. The error, however, as in ethical mistakes, is not in the principles but in the judgment that applies them. Taste is improved by culture, as are the delicacy and correctness of moral judgments. The liability to mistake is greater than in morals, because in æsthetics we are one remove further from the principles which we apply.

III. The ideal is usually nearer to perfection than the object of it observed in experience or expressed by art. A great artist is above nature and comes down upon it from his ideals. An imitator is beneath nature and tries in vain to lift himself up to it. Says Cicero: "We can conceive of statues more perfect than those of Phidias. Nor did the artist when he made the statue of Jupiter or Minerva contemplate any one individual from whom to take a likeness; but there was in his mind a form of beauty gazing on which he guided his hand and skill in imitation of it."† Goethe says, "The Greek artists in representing animals have not only equaled, but even far surpassed nature. . . . They turned to nature with their own greatness. . . . Our artists . . . proceed to the imitation of nature with their own personal weakness and artistic incapacity, and fancy they are doing something. They stand below nature. But whoever will produce anything great must so improve his culture that, like the Greeks, he will be able to elevate the mere trivial actualities of nature to the level of his own mind, and really carry out that which in natural phenomena . . . remains mere intention."‡

But must not an artist be true to nature? Yes; and he is the

* De Inventione, II. 1.

† Orator, c. 2 and 3.

‡ Conversations with Eckermann, pp. 341, 342.

more true to nature for approaching it from his ideal. A photograph is an exact copy of the man; but it is a copy of him when he is brought to a full stop, when his attitude and face are least expressive, and all his lineaments stiffen and shut him in, as an oyster shuts itself in its shell. A portrait is idealized; and for that very reason it is more true to nature; for it presents the man in his best expression, which best reveals all that is worth knowing in him as a man. So nature is the expression of ideals in the mind of God. In getting the ideal we get the real significance and deepest truth of nature.

IV. Ideals are possible only by virtue of the reason. Ideals are not found by observation but are creations of imagination according to the standard of reason. It is because man is rational that he is impelled to seek and enabled to find a perfection which exists neither in himself nor in the objects about him, but which is the standard by which he judges both himself and outward things. And it is because nature itself expresses the thoughts of the reason which is supreme in the universe, that man finds suggestions of his own ideals in nature and discovers all things arranged in a Cosmos progressively revealing the Ideal which is perfect and eternal in the mind of God.

V. The practical importance of ideals is the same with the practical importance of the imagination.

Invention alike in the fine arts and the industrial, is primarily the creation of an ideal. An attempt to realize anything in invention without an ideal must fail. The attempt would be like that of a child to arrange blocks while as yet it has not attained the ideal of a house or of any geometrical figure; it becomes a mere hap-hazard juxtaposition.

Ideals are important in discovery. The hypothesis, which is the first step in the Newtonian method, is simply the creation of an ideal.

Without ideals criticism is impossible; criticism is always the comparison of the actual with the ideal. One cannot say, It is a beautiful morning, or, It is a shocking bad hat, or, It is a love of a bonnet, without an ideal with which the object criticised is compared.

Without ideals we should have no knowledge of progress; for without them there would be no standard by which to determine whether any movement is progressive or retrogressive. The expectation of the progress of man, which is so powerful in modern Christian civilization, would have no significance if man could not in the light of reason project his vision to an ideal to be realized in the future beyond all that man has ever been or has ever attained in the past. What science tells us of higher and lower orders of plants and animals is meaningless,

except as man is able to form ideals with which to measure them as lower and higher. The theory of evolution involves in its very essence the doctrine of progress in the past and the expectation of progress in the future. But the theory itself is meaningless, unless man is endowed with reason that rises above all the trailing sequences of nature and furnishes a standard by which evolutionary progress from lower to higher becomes intelligible; and its realization through the ages past is incredible and impossible, if from the beginning no reason has had in itself the ideal toward the realization of which it has advanced and guided the progress.

Ideals are essential in the practical life of every day. The foresight necessary to success in business involves an ideal construction of the course of events affecting the business and the action demanded in relation to them. Teaching and receiving instruction involves the constant exercise of imagination in grasping what is taught in its true unity and significance. Controversy goes on endlessly because each disputant fails to picture to himself the attitude of the other. Even in morals ideals play an essential part. "Put yourself in his place;" "Do as you would be done by;" these maxims require the exercise of imagination to picture to yourself the rights and interests of another. Kant's maxim, "So act that you would be willing the principle of your action should be a universal law," requires, whenever it is applied, an imaginary construction of a moral system on the principle of that action and its comparison with the true ideal of a moral system accordant with reason.

§ 42. Beauty as known by the Reason; or Principles of *Æsthetics*.

It is only from the idea of perfection that the principles of a true æsthetical philosophy can be unfolded. Some of these principles I will set forth.

I. Beauty is ideal perfection revealed to the reason in some particular concrete object or combination of objects.

1. Beauty is perfection revealed, perfection lustrous and outshining. I do not mean that the beauty exists only when observed. The flower that blushes unseen loses none of its charms in its loneliness. But I mean that the word beauty, as used, not only denotes the perfection of the object, but also suggests that the perfection, if observed, would charm the observer. It indicates the connection between the perfection of the object and the admiring appreciation of the mind to whom the perfection is revealed.

2. The perfection must also be revealed in some concrete object. The ideal must appear in the actual. The law of gravitation mathematically

stated awakens no æsthetic emotion. But the conception in the concrete, of all bodies on the earth and of the solar and all stellar systems moving harmoniously in conformity with this law and constituting the cosmos, awakens æsthetic emotion.

There may be beauty in a master-stroke of military genius; but it is not in the abstract thought but in the concrete combination of movements by which the commander transforms peril into victory. Beauty can be predicated of perfection only as perfection is revealed or suggested in persons or things; in action, or in some natural or artificial product of action.

3. The perfection revealed in a beautiful object of nature or art is that of a finite object which within its own limits and in the peculiarity of its own being reveals a rational ideal of the perfect. It does not reveal perfection of all kinds, but perfection in a particular object. It may be a beautiful hand without symmetry of the entire body; or a symmetrical form without intellectual expression; some feature or lineament, some partial gleam of perfection. Hence the beautiful object must be of a kind capable of expressing a rational ideal of perfection and must reveal or suggest the perfection of its kind. A cottage may be beautiful as a cottage, though it would be ridiculous as a cathedral. Indeed the addition to anything of qualities belonging to things of another kind would make it imperfect. A dog may be beautiful as a dog; if wings or fins were added it would cease to be beautiful and become a monster. A picture of the human form with wings may be called an angel, but is a monster.

4. Objects are beautiful in different degrees. The ideals themselves are of higher or lower grades according as they express more or less of the affluence of the reason and the spirit. The ideal beauty of a rational being is of a higher order than that of a brute or inanimate being. And there are different orders of beauty in rational beings. In a European gallery a Madonna by Raphael and a Madonna by Murillo hang side by side. The ideal of the former was evidently that of the happy mother. The ideal of the latter was that of the conscious mother of the Christ, pondering in her heart the woe, the mystery and the promise of the Messianic life. Each ideal is expressed with the power of genius. The latter reveals greater riches of spiritual truth and moves the soul to proportionally greater depths. Also beautiful objects of the same kind approximate in different degrees to their ideals, and so may be said to have different degrees of beauty.

II. Beauty is the outshining of truth. Beauty is the revelation of an ideal. An ideal is an imaginative conception of an object as perfect. Perfection is predicated of an object when it is in entire accordance with the law of reason. Law is the truth of reason considered as a law

to action. Beauty is therefore the revelation in an object of the truth of reason.

"Beauty is the splendor of truth." This maxim is commonly attributed to Plato. I have never found it expressed in just these words in Plato's writings, but it is a legitimate inference from his philosophy. This Véron denies. He says, "We might with some difficulty establish a connection between such a phrase and the doctrine of Aristotle, which made imitation the aim and principle of art; but not with that of Plato."* He has made the surprising mistake of supposing the maxim to mean that beauty in art consists in the exact imitation of objects of nature. In its true meaning it is eminently Platonic and expresses the deepest reality of the beautiful. Nature is the expression of the archetypal thoughts or truths of the absolute Reason. An object is beautiful when it reveals the ideally perfect, and thus expresses the truth or thought of reason.

Symmetry is founded on mathematical ratios and proportions. The beauty of the Greek architecture depends on mathematical ratios, as of the diameter of a column to its height. A Frenchman, after measuring a column with its various parts, calculated by these ratios the dimensions of the Parthenon and of all its parts; then he measured the building and found nowhere a variation of more than a fraction of an inch. A gothic rose-window may be resolved into a skeleton of mathematical lines. The relative positions of leaves on the branches in different kinds of trees is expressed in a series of fractions varying according to an exact law. The musical scale is mathematical. The sweetness or harshness of the tone, its quality as inspiring and joyous, or sorrowful, as tender or defiant, and its harmony are described in science mathematically by the length and rapidity and relation of vibrations. The beauty is the outshining of exact mathematical truth.

These are examples of what is true of all beauty. When we penetrate to its deepest significance, we find that beauty is the splendor of truth. This accords with the fact that ideals are not formed from beneath by copying what is observed in experience, but created from above by the reason combining the material given in experience according to rational truth and law; thus they are standards by which the combinations of nature and those of art are judged as perfect or imperfect, beautiful or ugly. By these standards we thus judge the physical universe itself as a whole, and call it a Cosmos as ordered under law and progressively realizing a rational ideal.

III. Beauty, while the same in essence, is distinguishable by the

* *Æsthetics*; by Eugene Véron, Armstrong's Translation, pp. 96, 97, 392.

attributes or modes of existence in which it is manifested. Symmetry is beauty of form; the rational ideal of perfection of form. Gracefulness is beauty manifested in motion. Motion on mathematical lines straight or curved, describing geometrical figures and rhythmic in time, or of uniform or uniformly accelerated or decreasing velocity, is more pleasing than motion irregular in space and time. Military marching and evolutions, and dancing are both regulated by music and awaken æsthetic admiration. It may be presumed that all graceful motions, if measured, could be described with mathematical exactness. Beautiful motions are regulated motions, they conform to an ideal and reveal mind; unregulated motions are ugly. The attempt to regulate his movements by one not familiar with the law and not trained to control his muscles in accordance with it, is ugly. Hence the ease and grace of a well-bred person contrasted with the awkwardness of a boor in society. A firm signature like that of John Hancock to the Declaration of Independence as a regulated movement is pleasing; while the tremulous signature of Stephen Hopkins is displeasing. A curve may be pre-eminently the line of beauty because, deviating at every point of the motion from a straight line according to a law, it discloses at every point the presence and control of a mind realizing an ideal. Simple colors probably are merely agreeable to the eye. But in the combination of colors the imagination can create ideals and the combination may have beauty in the true sense. In this case the harmony which appears in the ideal creation rests on the scientific fact of complementary colors. Some writers, Lord Kames for example, limit beauty to visible objects. But we speak of beautiful music as properly as of beautiful forms. Simple tones and the quality of a sound may be merely agreeable or harsh to the ear; but the combination or harmony of sounds in music is beautiful. Titian's combinations of color and Beethoven's symphonies are true creations of genius. Odors and tastes and simple feeling like that of the smoothness of velvet, give no opportunity for ideal combinations; they are merely agreeable or disagreeable sensations. But these, and simple color, in combination with other elements of reality, may enhance the beauty of flowers, fruit or other objects of sense-perception. Power is also an element of beauty. The strength of a gnarled oak is an element of the ideal of it. But it must be force that is regulated. One never ceases to admire the moving piston-rod of a steam-engine, so regular, so calm, and yet so mighty. Unregulated power causes no æsthetic emotion, but only fear or consternation. Even mass, though having no beauty in itself, may, in combination with other elements, contribute to æsthetic emotion. Also, in any mechanical product, the adjustment and exact movement of its parts revealing intellectual skill, constitute an element in the

beauty. In a perfect steam-engine or watch, the beauty is not merely the symmetry of form, the gracefulness and strength of the movement, the harmony of color, but it is much more the accurate adjustment of the parts, all acting according to law in subordination to the design of the whole mechanism. The same is true of the action of man on men. We rightly admire as beautiful a campaign manifesting the brilliant combinations of military genius, or a stroke of political genius in the effective combinations of a great statesman. So also we admire the beauty of literary productions; not merely the rhythm and euphony of the language, nor the scenes which by the word-pictures are brought before our minds, but also the literary structure of the work as realizing an ideal. For the same reason we properly speak of a beautiful argument. Some writers limit the beautiful to objects perceivable by the senses. But these limitations have no philosophical basis. According to the only rational and philosophical criterion, every object is beautiful which is the concrete expression of an ideal of perfection. This being so, we see beauty in man's spirit not less than in his body. We admire the beauty of a character strong in righteousness and lovely in benevolence and grace. We admire the beautiful combinations by which a clear-headed man of powerful will overcomes difficulties and achieves success. We admire fortitude, patience, heroism when revealed in action. Seneca says of Cato, "Behold a spectacle worthy of God, which Jupiter might turn to look at, a strong man in adversity, composed and intent on his work." This beauty of the human spirit is the same in kind with all beauty, a perfection revealed in a being or in action and its products, an ideal revealed of something perfect in its kind; and no consciousness can distinguish the admiration which it awakens from genuine æsthetic emotion as different in kind.

IV. All beauty is spiritual beauty.

1. It is so because beauty is the revelation of ideals. It is essential to beauty, as already shown, that the ideal be revealed in some concrete form. The converse is equally true; it is essential to beauty that the concrete form be the revelation of an ideal. But an ideal is always the creation of mind or spirit. Thus "beauty is the fusion of idea with form." It is the revelation in the beautiful object of spirit to spirit;

"Something whose truth convinced at sight we find,
That gives us back the image of our mind."

The emotion of beauty is the joy of the spirit in finding in outward things the expression of ideals like its own.

2. The Cosmos and all beautiful things in it reveal the ideals of creative mind as really as the creations of human art do. We know that the inventions of human genius, whether in the industrial or the fine

arts, express the ideals of the artist. The chronometer whose movement is admired by the watchmaker expresses the ideal of its inventor. St. Peter's church is the thought of Michael Angelo built up in stone, the fresco of the Sistine Chapel is his thought expressed in painting.

The beautiful objects in nature are not the works of human hands nor the inventions of human minds. Yet in them, just as in works of art, we find the revelation of ideals like the ideals of our own minds. In these ideals we see the creations of another mind; and our joy is not merely in the beauty of the object, but also in discovering the mind which reveals itself in it. Mind does not delight in matter but in mind.

The fitness of nature to be a medium for the expression of ideals is recognized in the impulse of the human spirit to embody its thoughts in outward forms. Man naturally builds his thought into structures and organizations. He erects dwellings, invents tools and machinery, organizes states and institutions. He tames and improves the wild grains and fruits and beasts, almost creating them anew. He stamps his thought on nature. When men advance from savagery to civilization nature around them does the same. Before man emerges from the stone age he begins to polish and decorate his implements. Tylor says: "Among many figures (of animals) found in the French caves is a mammoth scratched on a piece of its own ivory, so as to touch off neatly the shaggy hair and curved tusks which distinguish the mammoth from other species of elephant. There has also been found a rude representation of a man grouped with two horses' heads and a snake or eel; this is interesting as being the most ancient human portrait known."* As he advances in civilization the embodiment of his thought in forms is more and more the creation of beauty. The rugged labor by which he subdues and fertilizes the earth also beautifies it. Always as in the ancient mythology the god of work is wedded to the goddess of beauty. A being thus impelled by his nature to construct his thought in things, must look on nature with all its adaptations as a product and expression of thought and must see in its beauties the revelation of rational ideals.

Also the language of man everywhere discloses his consciousness of the spiritual in the natural. Mental acts and states and all spiritual realities are designated by words denoting natural things; and conversely, we speak of the cheerful landscape, the fierce wind, the furious torrent, "the cowslip wan, that hangs the pensive head," and spontaneously characterize natural things with spiritual epithets. The natural corresponds to the spiritual as its symbol or shadow, as

"The swan on still St. Mary's lake
Floats double, swan and shadow."

* Anthropology, pp. 31, 32.

This is the foundation for personification and of our delight in it; as in Shelley's "Prometheus Unbound :"

"I thought among the lawns together
We wandered, underneath the young gray dawn,
And multitudes of dense white fleecy clouds
Were wandering in thick flocks along the mountains,
Shepherded by the slow unwilling wind."

3. The human body has a beauty the same in kind as that of other natural objects, symmetry, harmony of color, gracefulness of contour and the like. We speak of

"Rosebud lips, and eyes
Like harebells bathed in dew,
Of cheek that with carnation vies,
And veins of violet hue ;"

beauties identical with those of inanimate things.

This natural beauty of form, however, does not necessarily express the spiritual excellence and beauty of the soul within it. There may be a noble spirit in an ignoble form; and a frivolous or perverse spirit in a beautiful form. It is hard to believe that the traditional bust of Socrates in its ugliness is the genuine image of the form which enshrined the great intellect and lofty spirit of that man whom all ages since he died have honored. It is hard to believe that a man of noble mien and countenance can do a foolish or a mean act. Yet the spirit of man is free; it may abuse the noblest form by acts of folly and crime; it may glorify a form ignoble as that of Socrates with the beauty of a wise and noble life. But

"Though all things foul should wear the brow of grace,
Grace still must look so."

4. Above all beauty of the human form considered as we would a work of art which expresses the ideal of the artist, is a higher type of beauty, the immediate expression through the human form of the spiritual power and virtue of the living human spirit within it. God, says Lord Bacon, did "inspire the countenance of man with intellectual light." In its mobile expressiveness, its speaking eye and glowing or paling cheek, in gestures, in attitudes and motions the spirit is continually looking out on us and revealing its changing thoughts, feelings and determinations. As Dr. Donne said of an expressive face:

"The pure and eloquent blood
Spoke in her cheek and so distinctly wrought,
That one might almost say her body thought."

So Milton described Eve:

"Grace was in every step, heaven in her eye,
In every motion dignity and love."

A fair face without expression is as Tennyson describes Maud's:

"Faultily faultless, icily regular, splendidly null."

However beautiful the human form may be in itself, it is glorified with a higher beauty when a noble soul expresses its true and lofty sentiments through it; as when a musical instrument is silent we admire its richness and finish; but when a great player strikes the keys, the beauty of the instrument is lost in the richness of the music. And these expressions of character gradually fix their imprint on the person. Every vice imprints its own peculiar hideousness on the face and form,

"Unmolding reason's mintage
Charactered in the face."

Culture and virtue stamp themselves on the features, transfiguring them with spiritual glory. Chrysostom says of Bishop Flavian: "The countenance of the holy man is full of spiritual power;" and it is said of Stephen when arraigned before the Sanhedrin that all who sat in the Council looking steadfastly on him, beheld his face as it had been the face of an angel. The highest human beauty is that of a form beautiful in itself and transfigured with the beauty of a noble soul revealing its noblest thoughts and sentiments through it. The head of Daniel Webster was a "dome of intellect;" that of the elder Edwards, revealing the profoundest speculative thought and the loftiest spiritual love, is a model for painting the head of the apostle John.

5. I have said that the Cosmos itself and the beautiful objects of nature reveal rational ideals as really as a work of human art reveals the ideal of the artist. I may now venture further and affirm that a spiritual presence reveals itself in nature in a way analogous to the soul's revealing itself through the human body. God is ever living and active in nature. The soul that is alive to the beautiful, looks on nature as on a semi-transparent curtain on which, from the light behind, the divine thought, love and energy in their ceaseless activity are ever picturing themselves:

"The Being that is in the clouds and air,
That is in the green leaves among the groves."

"He is not far from every one of us; for in him we live and move and have our being."

6. Evolutionists admit that man finds in nature the image and counterpart of his own ideals. Mr. Murphy, in "The Scientific Bases of Faith," teaches that man delights in the beauty of nature because he is himself the product of nature's action on him through unnumbered generations, and therefore he is pleased to find in nature what he has found in himself. He is a microcosm and rejoices to find his own likeness in the macrocosm. But the rational philosophy alone gives at once the fact and its sufficient explanation. The supreme reason expresses its archetypal thoughts and ideals in the universe. Man is endowed with reason which though limited, is the same in kind with the supreme reason. In his own mind so far as its limits permit he sees the truths and laws of universal reason, and forms ideals, which are the same with the ideals of the universal reason expressed in nature. And when he finds them in nature he rejoices in their beauty and rejoices also in communion with that all-pervading spiritual presence which reveals itself through them.

V. Beauty has objective reality. This is obvious because beauty is perfection revealing itself in some individual object. The question whether beauty has objective reality or is only subjective has been much debated. The æsthetic philosophy as I have presented it, makes obvious both the answer and its true significance.

VI. Beauty can be manifested only to Reason. It is the manifestation of Reason to Reason. Beauty is appreciable only by a mind that is capable of forming an ideal. An ideal of perfection can be perceived in an object only when the mind is already capable of forming the ideal, of discovering it in the object, and comparing the object with it.

This is all the truth which there is in the assertion that beauty exists only in the mind of the observer; and that it is the mind of the observer which clothes the outward world with its own beauty. In this sense we may accept the words of Coleridge:

"I may not hope from outward forms to win
 The passion and the life whose fountains are within.
 Oh, lady, we receive but what we give,
 And in our life alone does nature live:
 Ours is her wedding garment, ours her shroud.
 And would you aught behold of higher worth,
 Than that inanimate cold world allowed
 To the poor, loveless, ever-anxious crowd,
 Ah, from the soul itself must issue forth
 A light, a glory, a fair luminous cloud
 Enveloping the earth.—
 And from the soul itself must there be sent
 A sweet and potent voice, of its own birth,
 Of all sweet sounds the life and element."

The same thought is expressed by Bryant:

“There is no glory in star or blossom
Till looked upon by a loving eye:
There is no fragrance in April breezes
Till breathed with joy as they wander by.

“Come, Julia dear, for the sprouting willows,
The opening flowers, and gleaming brooks,
And hollow green in the sun are waiting
Their dower of beauty from thy glad looks.”

VII. There is a universal and unchanging standard of beauty, by which the taste of individuals is to be judged as correct or incorrect.

1. This has been the doctrine of the most profound thinkers on this subject. I may select Goethe as their representative in modern times, who says:

“As all nature’s thousand changes
But one changeless God proclaim,
So in art’s wide kingdom ranges
One sole meaning still the same.
This is Truth, eternal Reason,
Which from Beauty takes its dress,
And serene, through time and season,
Stands for aye in loveliness.”

Plato is the representative of this type of thought in the philosophy of ancient Greece. In the Banquet or Symposium, Diotima is represented as teaching that he who, having fallen in love, has begun to admire the beauty of a young person, should be led to consider the beauty of others and thus learn that the beauty in every form is one and the same. Then he is to learn that the beauty of soul is superior to that of outward form; then he is to be led to see the beauty of customs, laws and science, and to understand that all beauty is of one kindred and the beauty of the human form but a small part of it. Thus not falling in love with and wholly devoting himself to any one person, he is guided towards the full sea of beauty. Then at last is revealed to him the vision of universal beauty, which “exists forever, being neither produced nor destroyed, and susceptible neither of growth nor decay. It is not beautiful from this point of view and ugly from that, or beautiful at one time or place or in one relation, and ugly at another, nor beautiful to some persons and ugly to others. Nor is it the outward appearance of face or hands or anything in which the body participates; nor is it any form of speech or wisdom; but it is beauty in itself and by itself, simple, uniform and everlasting. And all other beautiful things are beautiful by participation in this absolute beauty. And the true procedure is to use the beauties of earth as steps by which the

learner mounts to that higher beauty, going from one beautiful human form to two, and from two to all beautiful forms, and from beautiful forms to beautiful customs, and from beautiful customs to beautiful ideas, and thence to the idea of that which is beautiful in itself, and so at last he knows what beauty itself is." And Socrates adds that, "in the attainment of this end, human nature will not find a better helper than love."

This Platonic conception, including Plato's view of the development of the idea of beauty in connection with love, is expressed by George Eliot: "That adoration which a young man gives to a woman whom he feels to be greater than himself, is hardly distinguishable from religious feeling. What deep and worthy love is not so, whether of woman, or child, or art, or music? Our caresses, our tender words, our still raptures under the influence of autumn sunsets, or pillared vistas, or calm, majestic statues, or Beethoven symphonies, all bring with them the consciousness that they are mere waves and ripples in an unfathomable ocean of love and beauty; our emotion in its keenest moment passes from expression into silence, our love at its highest flood rushes beyond its object, and loses itself in the sense of the divine mystery. . . . Beauty has an expression beyond and far above the one woman's soul that it clothes, as the words of genius have a wider meaning than the thought that prompted them; it is more than a woman's love that moves us in a woman's eyes. It seems to be a far-off mighty love that has come near to us and made a speech for itself there. The noblest nature sees the most of this impersonal expression in beauty—it is needless to say there are gentlemen with whiskers, dyed and undyed, who see none of it whatever."

2. In accordance with the principles of æsthetics already stated, there must be a universal and unchanging standard; because beauty is the outshining of truth, and the expression to human reason of ideals archetypal in the mind of God and capable of being created by the human mind, which is in the image of God.

This is only the recognition in æsthetics of a power of reason implied in all science and philosophy. The possibility of scientific thinking rests on the fact that the individual reason can come into acquaintance and communication with the universal reason. All science assumes this possibility. Comte, as we have seen, starts with the conception of man in mere individualism according to the philosophy of Locke, and therefore capable of knowing only the impressions on his own sensorium. But in his sociology he regards man as so vitally organized into the system as scarcely to leave him his individuality. Evolutionists also come to the conclusion that man is a microcosm recording in his own organization the courses of nature for myriads of ages. All

physical science at every step recognizes the knowledge of the rational in the natural, of the universal in the particular and the contingent. The philosophy which I set forth gives an explicit enunciation and a reasonable explanation of this great truth and applies it in æsthetics.

Of this philosophy, the speculative, the ethical and the æsthetical are three branches. They all treat in different aspects the universal and necessary truths of reason.

3. There are works of art admired in all ages which are recognized as standards of beauty and models of art.

4. Against this æsthetic philosophy, the same objections are urged as against the rational intuition of the difference between the true and the absurd, the right and the wrong. If men exist who have no knowledge of the distinction between the beautiful and the ugly, men like Bret Harte's farmer,

"Troubled no more with fancies fine,
Than one of his calm-eyed, long-tailed kine,"

they are simply children of a larger growth, whose constitutional capacity is not yet developed. If where the idea of the beautiful has arisen, men's tastes vary, it reveals not a variation in the standard of beauty, but in the degree and kind of culture. And since the beautiful presupposes the knowledge of the true and the right, and is thus at the second remove from the intuition of truth, æsthetic ideas and culture must be later in their rise and development.

VIII. That which is revealed in beauty is perfection; that which is revealed or at least suggested in sublimity is also infinitude. An object, the ideal of which the mind can complete, compass and define, is beautiful. An object which, while revealing perfection in some trait, also swells beyond our sight and our comprehension and suggests the infinite, is sublime. It must suggest the infinite in addition to some trait of the perfect; for the disgusting and the hideous, however vast can never be sublime. Thus the ocean reveals power and vastness immense; the starry heavens, with beauty transcendent, reveal masses, distances and forces immense, and combinations and interactions, systems within systems too great for imagination to conceive. In painting or description the same impression of immensity may be produced by leaving something undefined. Ruskin remarks respecting one of Turner's pictures that the strain on the fold of a dragon's body issuing from a cave suggests the immensity of the part still hidden within. Milton's Satan "lay floating many a rood;" this indefiniteness makes an impression of immensity; while the more detailed description of Sin and Death awakens only disgust and horror. Homer's Polyphemus, minutely

delineated with the trunk of a pine for a cane, big but not great, reveals not the sublime but the monstrous.

Sublimity is, therefore, essentially the same with beauty, with the additional idea that it suggests immensity and infinitude. As we rise from one order of beautiful things to another, continually ascending to ideals grander and more majestic, we presently come in sight of power and perfection transcending our power of measurement and too grand to be defined and contained in our ideals. Then the soul is awed and thrilled as in the presence of the Absolute and the Eternal.

IX. Ugliness is the contrary of beauty. An object is ugly when it suggests a deviation from the ideal perfection.

The majority of human beings are neither beautiful nor ugly. The same is true of brutes, plants and natural and artificial products. They have a mediocrity which suggests neither perfection nor imperfection. It is only a few men and women, a few dogs and horses, a few objects of any kind that we distinguish from others of the same kind as beautiful, and only a few that we distinguish as ugly. At the same time we properly speak of a fine cabbage or handsome potatoes, comparing the best of the species with the inferior specimens; while compared with the rational standard of beauty the best attain only to mediocrity.

Any deformity is ugly—a wen, a hump, the paleness and emaciation of disease, a monstrous birth; for these are departures from the normal condition of the being. The same is true of stupidity, awkwardness and vice, revealed in the human face, action or character.

There are also species of creatures which are incapable of beauty, such as the hippopotamus and the alligator; the more completely the individual accords with the type of the species, the more ugly it is. It is far from the rational standard of symmetry of form or grace of movement or animal beauty of any kind. There are grades of beauty from lower to higher; but the grades begin below zero and we describe their ascent only as a diminishing ugliness. On this principle, in the Spanish fable of the wart, the wen and the hump contending for the prize of beauty, the prize was given to the wart because there was least of it. Such objects cannot be beautiful, because however complete in their kind, their kind is ugly.

Why such creatures exist is a question of theodicy, a part of the broader question why evil exists, and its discussion is not in place here. It may be said, however, that their existence may be justified for other than æsthetic reasons; that as related to the Cosmos they may even add to its completeness and beauty, as shadows add to the beauty of a picture and an occasional discord to the effect of music, and as many homely bricks are built into a beautiful house; and

that their existence may be, like other imperfections, incidental to the progressive development of the universe. It may be added, the common disgust at some animals results from a false association of ideas, and scientists when they study them find in them positive beauties.

There is also a certain technical beauty. A doctor collecting virus from a child that he had vaccinated, exclaimed as he rolled up the child's sleeve, "What a beautiful scab!" Another, examining a cataract, exclaimed, "It is a perfectly beautiful cataract." A third left the house of a patient who had just died, and rubbing his hands with glee, said to an inquirer, "The most correct case of apoplexy I ever saw; all the symptoms perfect." It is a perversion of all philosophy and common sense to call these deformities beautiful. And yet these incidents illustrate and confirm our æsthetical philosophy. When a man devotes his life to the study and cure of disease, it is natural that he should admire a case in which the disease develops and culminates according to its law and, contemplating it solely from that point of view, call it beautiful. And yet, compared with the universal standard of reason it is seen to be abnormal and ugly.

X. The apprehension of beauty or ideal perfection in any object is primarily an act of intellect, to which the æsthetic emotion is consequent. In this respect æsthetics is analogous to ethics. The æsthetic idea precedes the æsthetic emotion just as the ethical idea precedes the ethical emotion. All attempts to construct an æsthetical philosophy from the feelings must be failures. In this also the case is the same as in ethics. The principles involved are the same as in the discussion of the relation of the moral feelings to the moral ideas in ethical philosophy, and need not be repeated.

The capacity of æsthetic emotion is, therefore, distinctive of rationality. The same is true of scientific and ethical emotion. They presuppose respectively a knowledge of the True, the Right and the Perfect. To care for a flower because it is beautiful, to perform an act because it is right, to solve a problem from interest in truth, are each distinctive of a rational being.

§ 43. The Æsthetic Emotions. ✓

The emotion of beauty is the joy of the soul in discovering the ideally perfect in an object perceived or conceived. It is commonly called admiration.

I. This emotion is distinguished from all other feelings by the fact that its object is the ideally perfect revealed in concrete reality. Like all other simple emotions it cannot be defined analytically, but only by reference to the occasion on which it arises and the object which calls it

forth in consciousness. What the emotion is can be known only by experiencing it.

It is distinguished from all the natural sensibilities. When one is admiring the beauty of a table richly spread for a banquet, he says, "It is too beautiful to eat." When appetite comes in the beauty is forgotten; it all sinks into a heap of victuals which harpies are seizing and carrying off. In looking at a beautiful human form, or a painting or statue of it, so long as the beauty is admired every voluptuous desire is far away. No lust from the sphere of sense may thrust its satyr-hoof into the presence of beauty.

Æsthetic emotions are also distinct from the other rational sensibilities. In the sphere of thought reason shows us what is true; in the sphere of efficient action it shows us what is right; in the sphere of acquisition and enjoyment it shows us the good which has in itself true worth. Distinct from each of these, in the sphere of æsthetics it shows us what is perfect and in itself admirable.

The emotion of beauty is distinguished from the scientific emotions. The desire to know the truth prompts to ascertain and vindicate it. The emotion of beauty is not an interest in discovering, proving or propagating truth. It is simply joy in an ideal in which the truth reveals itself already dressed.

It is distinguished from the moral sentiments impelling to duty, rejoicing in self-approval, or suffering in remorse. It is simply joy in the beauty of perfection already revealed. In art its immediate object is to express an ideal, not to inculcate duty. A story or poem written to teach a truth or inculcate a duty is usually inferior as a work of art, because the author is occupied with preaching rather than creating. His mind is not full of beautiful ideals which "come like free children of God and cry, Here we are,"* and whose beauty he is impelled to depict. Æsthetic emotion is not immoral, but it is non-moral.

"So, Lady Flora, take my lay,
And if you find no moral there,
Go, look in any glass and say
What moral is in being fair.

"Oh, to what uses shall we put
The wildwood flower that simply blows?
And is there any moral shut
Within the bosom of the rose?

"But any man that walks the mead,
In bud, or blade, or bloom may find,
According as his humors lead,
A moral fitted to his mind."

* Goethe in *Conversations with Eckermann*, p. 63.

Æsthetic emotion is also distinguished from the prudential. It is disinterested. It holds itself aloof from all desires and calculations of gain. The beauties of the earth are not utilitarian conveniences. It may be objected that the abundance of blessing may itself be an element of beauty. This is not denied; it may be an element of the ideal. An example of it is in that beautiful description of the earth rejoicing under the rain in Psalm 65: 9-13. But while the poet was admiring the beauty, joyful with the rejoicing earth, if a farmer were calculating how much money the rain would put into his pocket, he must have been insensible to the beauty.

II. The emotion of beauty prompts to share it with others. When we see anything beautiful we are always impelled to point it out to others. Beauty is but half enjoyed when enjoyed alone. It seems to be an instinctive recognition of the universal and unchanging in beauty; it is for all, not merely for one.

III. In observing the beautiful the mind is in the attitude of a Seer; it contemplates the expressiveness of things; and only when the mind is in this attitude can emotions of beauty arise. In the sphere of empirical and philosophical science the mind is occupied with observing, generalizing and classifying, with inventing and combining, with analyzing, synthesizing and inferring; its whole aim is to discover truth. The "Eureka!" of Archimedes was an investigator's shout rejoicing in discovery achieved.

In practical life the mind deals with the same subjects, but with an end beyond the discovery of truth. It is applying knowledge to the conduct of life. It is dealing with facts and truths as disclosing means to ends, as motives to action, as guides to duty, as disclosing a good to be attained and the means of attaining it, as related to God and his service.

But in æsthetic emotion the mind is no longer busied with investigation, speculative or practical. It simply opens to an object to receive what it has to express, as a flower opens itself to the sun to receive its light. It is in the attitude of a Seer. Hence the name *æsthetic*, that is, perceiving, seeing. Beautiful things have an ideal to show us. When we get acquainted with them and, as it were, get their confidence, they tell us their secret; they open their hearts to us. Thus in æsthetic perception we come into friendly relations with nature, and see the very heart of things. Science tears nature to pieces to find out how it is made; practical art seizes its forces and compels them into service. In æsthetics we commune with nature lovingly and confidentially as a friend; and it discloses the great thoughts and ideals of reason intrusted to its keeping; it reveals the thoughts of God and makes us know that "He is not far from every one of us."

When Kepler was studying the heavens his mind was occupied with his hypotheses, his calculations, his verifications, and there was no place for æsthetic emotion. Afterwards, as he looked on the planetary system moving in accordance with the laws which he had discovered, he saw the expressiveness of the system and exclaimed, "Oh, God, I read thy thoughts after thee."

When Napoleon was planning and executing a campaign, he was occupied with the practical combinations, and thought only of victory, not of beauty. But as we look back on it depicted in the stillness of the past, we admire the masterly combinations of genius and feel their beauty.

While an orator is speaking, his whole speech is an action convincing, persuading, inspiring, and both he and his hearers are occupied with argument and appeal, and have no time to think of beauty. But as we look on the picture given in history of Paul on Mars Hill, of Demosthenes speaking against Philip, of Webster in the Senate, or Lincoln at Gettysburg, we feel that it is sublime.

And this is the difference between eloquence and an actor's performance. The former is an action to convince, to persuade and inspire, pressing so urgently on the hearers' intellect, conscience and heart as to leave no room for æsthetic admiration. But the end and aim of an actor's performance is æsthetic. The same is the difference between a speech and a poem. When public speaking, as commonly in popular lectures, addresses itself to æsthetic ends, it becomes a play with one *dramatis persona*, and eloquence is impossible. The people demand the impossible, for they demand eloquence as an amusement.

IV. Æsthetic emotions are frequently confounded with emotions not properly æsthetic.

1. The emotion of beauty is not mere wonder or surprise which arises on observing something new, unexpected or extraordinary, as a big squash or beet at an agricultural fair. The emotion of beauty is commonly called *admiration*. This, however, denotes æsthetic approval of the object and joy in it as expressing or indicating an ideal of perfection. It is true that the pleasure felt in seeing beauty is usually accompanied with wonder, because beauty is rare. But the wonder is no part of the emotion of beauty. In heaven all things will be beautiful, so that beautiful objects will cause no wonder or surprise. And yet the intensity and freshness of the delight in beauty will not be less.

2. Some miscalled emotions of beauty are merely agreeable sensations; as the feeling of velvet, simple colors, or the pleasant quality of a voice. It is not always easy to decide where the ideal or rational beauty begins. Prof. Müller, in a course of lectures at Berlin, explained the beauty of the curved line as merely an agreeable sensation resulting

from the fact that the muscles which move the eyeball are so situated that the eye can trace a curved line with less fatigue than a straight one. It admits also a rational explanation already given.

3. *Æsthetic* emotion must be distinguished from the pleasure of mere excitement. In tragedy, comedy or novels, in theatrical and other exhibitions, there may be the enjoyment of beholding ideals. The plays of children are a mimicry of a life higher than their own. In their plays they are lifted out of the life of children into the life of men and women; by the "make-believes" which are the creations of a child's imagination they surround themselves with ideals of the pursuits and interests of mature life. Their pleasure in their plays is a sort of *æsthetic* enjoyment of the ideals of a life higher than their own. A drama is fitly called a play. A good theatrical performance, like the plays of children, lifts the spectators into a life higher than their own. The same is true of reading a good tragedy, or comedy, or novel. We are lifted out of our prosaic commonplace life into contact with heroism and beauty, with sweetness and grace; we see life in a higher intensity; we are admitted to the halls of nobility and the palaces of kings; we see men realizing the highest ideals in the lowest circumstances and under the greatest difficulties; we are compassed with the ideals of a life higher than our own. So far our emotions are largely *æsthetic*, and we are recreated, refreshed and healthily inspired and stimulated.

But the danger in these cases is of substituting the pleasure of mere excitement for the *æsthetic* inspiration. Men enjoy being excited. They like to be played on as a musical instrument by some master mind who pulls out all the stops and brings out the feelings in their utmost capacity and variety. It is mental exhilaration after the monotony and labor of daily life. Hence men may come to seek excitement in the drama, the theatre and the novel. Their minds become drunk with them and at last the victims of a habit of mental intoxication. They seek and must have the excitement; and in the thirst for excitement they lose their interest both in the beauty of the ideals of genius and in the simplicity and reality of actual life. In coarse natures the desire of excitement can be satisfied only with the blood-and-thunder stories of the sensational paper and the dime novel; or with bull-fights as in Spain, or the gladiatorial conflicts with men and beasts in the Amphitheatre of ancient Rome.

V. The emotion awakened by sublimity is joy and admiration, like that awakened by beauty, but it is a joy and admiration penetrated and made solemn with awe. It takes on a tone of solemnity and awe in the presence of what is above us. Great genius has a tone usually even of sadness.

It is sometimes said that terror belongs to emotions of sublimity.

On the contrary terror, being an emotion pertaining to personal interest, is entirely excluded from the æsthetic emotions. The painter Vernet in a storm at sea had himself lashed to the mast in order that he might contemplate the grandeur of the scene. If he had been frightened, the terror so far as it controlled him, would have excluded the emotion of sublimity.

VI. The emotions awakened by ugliness are those of the ludicrous, the ridiculous and the disgusting. An elephant "wallowing unwieldy, enormous in his gait," is ludicrous, because he is clumsy, as if with all his strength he could not use his own limbs. Drollery is ludicrous as a man's acting beneath himself. A monkey is ludicrous probably from suggesting the human form; "*Simia quam similis, turpissima bestia, nobis.*" A fall is ludicrous as a sudden departure from the normal attitude. A combination of incongruous objects is ludicrous, exemplified in a squib on George IV.,

"The breakfast table spread with tea and toast,
Death-warrants and the Morning Post."

The ridiculous means more than the ludicrous as implying disesteem and depreciation. We laugh with the person who is in a ludicrous position, we laugh at one who is ridiculous. We get beyond laughter in the emotion of disgust. The lower orders of living beings are disgusting as revealing a low organization, an almost death in life; so is a heap of rubbish, or a mass of corruption as revealing disorder and decay.

§ 44. *Æsthetic Culture.*

Even with high æsthetic culture the perception of beauty depends on the mood of the spirit. The world is always full of beauty but we do not always see it. A pebble does not commonly awaken æsthetic emotion. But as I gaze on it and think that it has been floated and washed and worn by Titanic forces through measureless geological epochs, I feel the emotion of the sublime. So in the striking of a clock may be heard the voices of eternity. In everything is a door that opens into the infinite. To the eye of the Seer that door opens, and his spirit is awed. In ordinary moods we do not see the grandeurs and glories which nature, rightly contemplated, is always revealing.

"As one who looks on glass,
On it may rest his eye;
Or let his vision through it pass
And then the heavens espy."

But in any mood the degree of this power of seeing the beautiful and

sublime depends on culture. The æsthetic mind sees a soul looking out through all nature's forms.

"He sees them feel or links them with some feeling."

But nature little finds its way into the heart of the uncultured man.

The need of culture for æsthetic perception is analogous to the similar need of it for the knowledge of the True and the Right already considered, and needs no further explanation.

Æsthetic culture is promoted by intellectual culture in the knowledge of the truth and ethical culture in the knowledge of the Right. For the knowledge of the Perfect presupposes the knowledge of the True and of the Right. All spiritual culture is helpful to æsthetic culture.

Direct æsthetic culture is also needed. This is best effected by the study of the great works of genius. But æsthetic culture does not stop in itself; it reacts in prompting all spiritual culture. In studying the works of art we are made partakers of "the vision and faculty divine of genius;" for we have revealed to us what seers in the light of genius have seen in nature and in men. In reading a poem or in examining any work of art we are examining nature and life as genius has seen and revealed their "open secret." We are waked to the consciousness of the wonderful and sublime realities in them. We are lifted from the level to which conventionalism has smoothed us. We see the ideals which make life noble, nature beautiful and the spirit of a man of more worth than a world.

Of this kind of influence we have an historically renowned example in the statue of Zeus by Phidias. It was itself suggested, it is said, by Homer's famous lines:

"Then beneath his raven eyebrows
Zeus Kronion gave the nod,
And the locks ambrosial started
From the temples of the God;
Huge Olympus reeled beneath him,
Root and summit, rock and sod."

Its powerful effect on Greeks and Romans who saw it is described by Winckelmann in his "History of Art." Goethe says of it in his "Winckelmann:"

"If a work of art is once produced, and does it stand in enduring reality before the world, then it produces an enduring effect the highest possible. For inasmuch as it develops itself spiritually out of the collective powers, it resumes into itself everything noble, or worthy of reverence and love, and raises man above himself by embodying a soul in a human form; expands the sphere of his life and acts and divinizes

him as far as concerns the Present; in which, indeed, the Past and the Future are included. With such emotions were those seized who looked on the Olympian Jupiter, as we can well understand from the descriptions, accounts and testimonies of the ancients. The god had become a man in order to raise the man into a god. The eye beheld the highest type of dignity and was inspired for the highest beauty. In this sense we may admit that those of the ancients were right who declared with full conviction that it was a misfortune to die without having seen this work."*

§ 45. *Æsthetics and Theism.*

The idea of Beauty unfolded in its full significance discloses the idea of God.

It has been shown that all thought rests ultimately on the knowledge of the universal and unchanging. In the background of all consciousness of the phenomenal, the transitory and the individual, is the knowledge of the abiding, the unchanging and the universal. So in every individual form of beauty is a revelation of beauty abiding, unchanging and universal. In affirming this I only affirm as underlying the idea of the beautiful that universal and absolute reality which underlies every idea of reason, and is the ultimate ground of the possibility of rational thought. Whether we look at nature speculatively, ethically, religiously or æsthetically, we see the spirit "ever weaving at the whizzing loom of time the living clothing of the Deity" by which we see him.

That the True and the Right involve the idea of God has been established. But the perfection which beauty reveals is the conformity of the being with the truth and the law of reason. In it truth and right are revealed in unity. All beauty is spiritual beauty; it is the revelation of reason; and, as it is the revelation of perfection in which truth and law are expressed in unity, in it the absolute and perfect Reason seems to look us directly in the face and to reveal itself immediately to our spiritual vision.

It is also evident that there must be a universal and unchanging standard of the beautiful; but such a standard is possible only if that which is supreme and absolute in the universe is Reason.

Also there are orders of beauty, ascending with the orders of being. A finite being, perfect in its kind, may on account of its limitations, be destitute of perfections peculiar to another and higher kind. A beautiful rose cannot have the spreading majesty of an oak, and an aged dog cannot have the intellectual and spiritual beauty of an aged and venerable man. Our ideals of perfection rise in an ascending series till the mind rests in the all-perfect and all-glorious God. "The

* *Sämmtliche Werke*, Stuttgart und Tübingen, 1855, Vol. V., pp. 211, 212.

ideal!" exclaims Cousin, "behold the mysterious ladder which enables the soul to mount from the finite to the Infinite."*

In the emotion of sublimity the soul is awed with the conscious presence of a greatness which transcends it, and is moved to worship. Similar, though less noticed, is the influence of the emotion of beauty at the revelation of transcendent perfection. Hildebert, Bishop of Rheims, early in the twelfth century, was filled with admiration of the statues of the gods which then abounded in Rome; and in uttering his admiration he declared that these works of human genius lift us above all heathen gods, and that by looking at them the heathen gods themselves might learn what it is to be divine and might long to be like them:

"Hic superum formas superi mirantur et ipsi,
Et cupiunt fictis vultibus esse pares.
Non potuit natura deos hoc ore creare,
Quæ miranda deum signa creavit homo.
Vultus adest his numinibus, potiusque coluntur
Artificum studio, quam deitate sua."†

§ 46. Erroneous Theories of Æsthetics.

I. A great variety of erroneous theories of æsthetics have been published, characterized by superficial and confused thought, and some of them puerile and laughable. Such is Burke's theory, in the "Essay on the Sublime and Beautiful," that "beauty acts by relaxing the solids of the whole system" and that "the genuine constituents of beauty have each of them, separately taken, a natural tendency to relax the fibres."‡ Hence he emphasizes smoothness as pre-eminently a quality of beautiful objects; he says, "I do not now recollect anything beautiful that is not smooth;" and explains it by its effect in relaxing the muscles. An example which he gives us is, "A bed smoothly laid and soft" . . . because it "is a great luxury disposing to a universal relaxation, and inducing beyond anything else that species of it called sleep."§ These theorists err in a manner analogous to the error of a physician who prescribes for symptoms without inquiring for the causes of the disease. They construct their theories from some trait of a particular object which pleases, without ascertaining the principle which declares what beauty is. Of these theories I consider but two.

II. The first is the theory that objects are beautiful because they have become associated with previous agreeable feelings. Mr. Jeffrey states it thus: "Our sense of beauty depends entirely on our previous

* Du Vrai, du Beau, et du Bien, Lect. IX.

† Quoted by Bunsen, with a translation which fails to give the chief point of significance. God in History, Vol. II., p. 268, Winkworth's Translation.

‡ Part IV., Section 19.

§ Part III., Section 14, and IV., Section 20.

experience of simpler pleasures and emotions, and consists in the suggestion of agreeable or interesting sensations with which we had formerly been made familiar by the direct and intelligible agency of our common sensibilities; and that vast variety of objects to which we give the common name of beautiful, becomes entitled to that appellation merely because they all possess the power of recalling or reflecting those sensations of which they have been the accompaniments, or with which they have been associated in our imagination by any other more casual bond of connection.”*

This is an application to æsthetics of the same theory of association by which Mill and others have attempted to account for our necessary beliefs of the first principles and the ethical ideas and laws of reason. This theory is being superseded by the broader theory which accounts for all the necessary beliefs, all the primitive truths of reason, all ethical and æsthetic distinctions and emotions, as imprinted on the human organization, by the continuous and uniform impression of nature, in its gradual evolution through many generations. The theory needs be no further considered. I will only add that the advocacy and application of this theory by Erasmus Darwin seem to constitute a complete *reductio ad absurdum*. In explaining by the association of ideas the origin of the idea and emotions of beauty, he says: “Soon after it (a babe) is born into this cold world it is applied to its mother’s warm bosom, . . . which the infant embraces with its hands, presses with its lips and watches with its eyes; and thus acquires accurate ideas of the form. . . . Its pleasure at length becomes associated with the form. And hence in our maturer years, when any object of vision is presented to us, which by its waving or spiral lines bears any similitude to this form—whether it be found in a landscape with soft gradations of rising and descending surface, or in the form of some antique vases, or in the works of pencil or chisel—we feel a generous glow of delight.”† In like manner he explains the natural signs and our instinctive interpretation of them: “When the babe is satisfied the sphincter of the mouth is relaxed and the antagonist muscles produce the smile of pleasure. Hence the smile, during our lives, is associated with gentle pleasure.”

III. The second theory requiring notice is that of Prof. Alexander Bain. The one distinctive characteristic of beauty is the agreeable feeling which it produces. “Excepting the feeling itself, there is no one thing common to all the objects of beauty.” “The search after some common property applicable to all things named beautiful is now aban-

* Encyclopædia Britannica, 8th Ed., Article Beauty.

† Zoonomia: Ed. N. York, 1796, Vol. I., pp. 104, 109.

done. . . . The common attribute resides only in the emotion, and even that may vary considerably without passing the limits of the name." The agreeable feeling is distinguished from other agreeable feelings in this: the beautiful objects "give us delight as their primary end," that is, "they do not minister to our necessities;" they "have no disagreeable or revolting accompaniments, and their enjoyment cannot be restricted to a single mind."* As another writer expresses it, "The Beautiful is the objective side of the purely pleasurable," that is, any object is beautiful which gives pleasure unmixed with anything disagreeable. He adds: "A cause of one's pleasure is not thought of as beautiful until it is conceived as holding this common relation to other minds besides our own."

This may be taken as the representative of æsthetic theories which begin with the feelings without recognition of the fundamental principle of beauty in the reason. It is the latest product of the fruitless studies to construct such a theory which have been going on through centuries, and may be accepted as their highest and conclusive result. But as a theory of æsthetics it is an entire failure.

In the first place, it fails to distinguish between the beautiful and the ugly. It gives no criterion for making the distinction. It gives no distinctive idea of beauty, and no rational principle determining what beauty is. It thus breaks down and fails as an æsthetic theory and forfeits all right to be so called. There can be no empirical science of beauty unless some distinctive characteristic common to all beautiful objects can be found. There can be no philosophical science of beauty unless some rational principle can be found as a standard of discrimination between the beautiful and ugly. But this common characteristic and common principle this theory cannot find and the search for them it abandons in despair. It thus confesses its own incompetency and failure.

And this failure is inherent in the method, which begins with the æsthetic feeling and attempts from it to attain an æsthetic principle. The only principle thus attainable is that things are beautiful because they are agreeable. This is putting the effect for the cause. It is like saying that sugar is sweet because it is agreeable and wormwood bitter because it is disagreeable. Sugar is not sweet because it is agreeable; it is agreeable because it is sweet. Wormwood is not bitter because it is disagreeable; it is disagreeable because it is bitter. The sun is not warm because it is agreeable nor polar darkness cold because it is disagreeable; but the sun is agreeable because it is warm, and the polar darkness disagreeable because it is cold; and it is the business of science

* The Emotions and the Will, 213, 210, 211; Compendium of Psychology, p. 292.

to point out the more or less rapid vibrations of the ether which produce these respective effects. So there is neither æsthetic science nor philosophy in saying that the Apollo Belvedere is beautiful because it is agreeable; and yet this is all which this theory of beauty has to say.

We have already seen that according to the theory of knowledge which develops it from sensation we cannot attain to real knowledge; and that according to the ethical theory which develops moral distinctions from moral emotions, we cannot attain to moral ideas; so this theory, which tries to develop beauty from the æsthetic emotions, fails to attain any distinct idea of beauty and sticks fast in the idea of the agreeable or pleasing. It is a failure inseparable from the method.

And this is the only feasible method for those who recognize no knowledge but what comes from sensation and our consciousness of sensations, and who hold that man is nothing but his physical organization. In ethics they have nothing but the pleasurable and the expedient, which they substitute for moral ideas, and in æsthetics nothing but the pleasurable, which they substitute for beauty.

While the theory gives no criterion for distinguishing the beautiful from the ugly, it also fails to distinguish the agreeable emotions awakened by beauty from other agreeable feelings. It is true that the emotion of beauty is disinterested, but so are all altruistic feelings. It is true also that we are prompted to share it with another; but the same is characteristic of wonder and of some other non-æsthetic emotions. The æsthetic emotions can be distinguished from other agreeable feelings only by the objects which awaken them. The very fact that all men do distinguish certain emotions as æsthetic proves that there is something distinctive in the beautiful objects, but this theory denies that there is any common distinctive quality in the objects and cannot in this way distinguish æsthetic from other agreeable feelings. An easy-chair produces agreeable feelings; why then is it not beautiful? Prof. Bain says: "An easy-chair is too confined in its scope to be an æsthetic object."* If then it were enlarged into a *tête-à-tête*, so that it could be shared with another, it might become beautiful. But if it were a chair elaborately carved of some rich wood, elegantly finished and symmetrically shaped, it would be beautiful, however confined in its scope. A rose does not cease to be beautiful when a lady plucks and wears it. She has appropriated the rose, but not its beauty. Beauty cannot be appropriated.

Prof. Bain says: "The search for the one common attribute of beautiful objects has been an entire failure. Had there been such we should have known it in the course of two thousand years." The multitude

* Emotions and Will, p. 212.

of failures has been because the idea of the beautiful has been sought in the feelings, not in the reason. The result has been the enumeration of a multitude of pleasing objects and qualities, a mosaic of pretty things with no unity of principle. But Prof. Bain is mistaken when he says that the true idea has never been found. The æsthetic philosophy which teaches that beauty is the expression of ideal perfection has long been held by profound thinkers. It meets all the conditions of the problem. It gives a principle which explains all beauty by the element of perfection common to all beautiful objects, from a China cup to a Corliss engine, from a painted flower to a Sistine Madonna or an Olympian Jupiter, from a violet or rose to the starry heavens and the Cosmos itself, from the innocence of a child's face to the character of Jesus and the perfection of God

✓

CHAPTER XI.

THE GOOD: THE FOURTH ULTIMATE REALITY KNOWN THROUGH RATIONAL INTUITION: THE NORM OR STANDARD OF WHAT MAY BE AC- QUIRED AND ENJOYED.

§ 47. The Question Stated.

I. I USE the word *happiness* to denote agreeable feelings, joy or pleasure, and unhappiness to denote disagreeable feelings, sorrow or pain. The sum total of agreeable feelings constitutes the happiness of a person's life.

Well-being is of broader significance, having reference to an ideal standard of perfection; perfect health is the well-being of the body. It means more than enjoyment. There is enjoyment in the visions of a hashish-eater, but not well-being. *Welfare* is of similar significance.

The *Good* I use as synonymous with well-being.

II. The occasion in experience on which the idea of good and evil arises is some feeling impelling to exertion for some end or reacting in joy or sorrow, pleasure or pain.

Good can be predicated of non-sentient beings only as related to sentient beings; as grass is good for cattle; wood and stone are good for man to use. We cannot conceive of an inanimate being as in itself a subject of good. It is not for the good of a block of marble that it is chiseled into a statue.

If man were never impelled by any motive to action and were incapable of enjoyment or suffering, he could have no idea of good and evil. If it were possible to conceive of a being as pure reason and nothing else, we could not conceive of that being as a subject of good or evil; for the being would never experience the impulse of any motive nor be affected by any feeling.

III. The idea of good or well-being having arisen, man must have some criterion or standard by which to decide what his good or well-being is. He finds himself impelled by various and often conflicting motives, susceptible of happiness from various and often incompatible sources, and thus is obliged to decide which is for his good. When he

has chosen and attained his object, he is often disappointed, and finds that he chose what was not for his good. And when he has found enjoyment in what he has sought and attained, he sometimes feels ashamed that he has sought it and even that he is capable of deriving his happiness from such a source.

IV. Two answers to the question, "What is the good and by what criterion is it discerned," demand consideration.

1. The first answer is, The good is primarily and essentially happiness, that is, enjoyment or pleasure. The criterion is that of quantity only, measuring the intensity, continuity and duration of the enjoyment. The good or well-being is the happiness which has the highest degree of intensity, continuity and duration. Its maxim is well expressed by Lucretius: "*Dux vitæ dia voluptas.*"*

This theory of the good is called *Hedonism*, from the Greek *ἡδονή*. The name was originally given to the doctrine that the good consists in the pleasures of sense, taught by Aristippus and the Cyrenaic school. It is now more widely applied to denote the doctrine that the good consists in enjoyment. This theory and the ethical theories founded on it have also been denoted by the name *Eudæmonism*, from *εὐδαιμονία*, meaning happiness.

2. The second and true answer is: what good or well-being is must be determined by a standard or criterion of reason. This standard or criterion is found in the truths, laws and ideals of reason. The good is whatever, in accordance with this standard, reason adjudges worthy of pursuit by a rational being, or worthy to be the source of enjoyment to a rational being. Or, it is whatever has worth as estimated by the standard of reason. Here is a new reality, the knowledge of which is dependent on rational intuition. It is the norm by which reason estimates all objects of pursuit and acquisition, and all sources of enjoyment.

V. The true good comprises both an empirical element, *enjoyment*, which is known in experience; and a rational element, *worth* or the *worthy*, as estimated by the standard of reason. It is this last which is distinctively the fundamental idea of reason in reference to the good, and which is the subject of this chapter. The empirical element is, however, inseparable from the rational in the true good, and must not be overlooked in the discussion. Such an oversight would lead to one-sided views which would involve fundamental error.

VI. In Hedonism there can be no question, as to pleasures and their sources, which is the *true* good; for all pleasures are held to be true good, differing only in quantity. In Hedonism the first and only ques-

tion is, "What is the highest good, or *summum bonum*?" But when we recognize pleasures and their sources as themselves adjudged by reason to be worthy or unworthy, to have worth or to be worthless, the question necessarily arises as to them, "What is the true good?" or, more properly, "What is the good?" Ethical philosophy has been vitiated by beginning its investigations with the question, "What is the *summum bonum*?" and pursuing its investigations as if the answer to that question would give the fundamental principle and law of ethics. But it is a false method, characteristic of Hedonism, and must issue in falsity. Before we ask the question, "What is the highest good?" we must answer the question, "What is the good?" We must ascertain what the good is before we can measure its quantity and compare its degrees. This we can ascertain only by going back of all questions of pleasure, and judging of the worthiness of pleasures themselves and their sources by the standard of the truths, laws and ideals of reason. And when thus we know what the true good is, we know that it must be also, to every rational being, the highest good.

§ 48. Hedonism a False Theory.

Before discussing what the good truly is, it is necessary to expose the inadequacy and falsity of Hedonism. And preliminary to this it should be said that various theories of ethics have been founded on Hedonism or have to some extent accepted it as true. These theories are worthy of more or less disapproval according as they rest more or less entirely on the Hedonistic error and apply it with more or less consistency. These ethical theories are not to be considered here, but simply the Hedonistic conception of what the Good is.

I. Hedonism is the legitimate and necessary outcome of sensational theories of knowledge; it is incompatible with the recognition of Reason as a source of knowledge. It is thus partial and one-sided, not recognizing all the facts in the constitution and life of man. It constructs a science of man as if he were a creature of sense, feeling and impulse only. It does not acknowledge the existence of reason in man or of any standard of rational discrimination between his impulses. The only intellectual act recognized is the notation in experience of the quantity or degree of pleasure. It is consistent with positivism and with every theory which restricts knowledge to the phenomena of sense. It is the legitimate and necessary issue of such theories of knowledge, which, excluding all knowledge of principles, laws and ideals originating in the reason, have nothing left for the idea of good or well-being except enjoyments, and no criterion for discrimination between them except their quantity or degree. Accordingly the advocates of Hedonism have commonly held to some form of the sensational philosophy, from Aris-

tippus and Epicurus, its representatives in ancient times, until now. But it is in irreconcilable contradiction to the philosophy which recognizes knowledge of truths, laws and ideals originating in the reason. If we believe in God, we shall not begin with seeking enjoyment at random wherever it may be found, with no thought but of the intensity and duration of the enjoyment. On the contrary, we shall begin with the thought that the universe is dependent on God; that its constitution is nothing else but the truths, laws, ideals and ends eternal in God, the absolute Reason, and expressed and realized in the universe; and that man is so constituted in the image of God that his reason attests the supremacy of the same truths and laws. The good which is possible in such a universe for such a being must be determined by rational standards and can be found only in accordance with the eternal truth and law of God; it cannot be the mere quantity of enjoyment from whatever source derived. Even if we say God requires us to seek the good of all beings, yet the good which God requires us to seek must be determined in accordance with the truths, laws, ideals and ends which are eternal in God and expressed and realized in the constitution of the universe. It is practical atheism to insist that the good is the aggregate of enjoyment from all sources, measured only by quantity, with no reference to the truth and law of God. In fact if a man try to measure the good by the quantity of enjoyment, he may find himself incapable of enjoyment in the service of God; and the religious life, with its humble trust in God, its self-renouncing and self-sacrificing love, may seem only gloomy and repulsive to him. He may see enjoyment only in self-sufficiency, self-will, self-seeking, self-indulgence, self-serving and self-glorying. In this character and state of mind, if he estimates the good only by the quantity of enjoyment, he will be led entirely away from the good. He not only will not choose it, but he will not see it as good. He must make a new supreme choice and form a new character in order to appreciate the blessedness of a life of self-renouncing faith and love. If our Lord should speak to him, he would say as to Nicodemus, "Except a man be born anew, he cannot see the kingdom of God." If an old Hebrew prophet should speak to him, he would say, "Wo unto them who call evil good, and good evil; who put darkness for light, and light for darkness; who put bitter for sweet, and sweet for bitter."

Some who acknowledge self-evident intuitions transcending sense, yet remain so imperfectly cleared from Locke's sensationalism that they fall into the Hedonistic error. But they can neither make it consistent with their own principles nor purge it from the taint of its origin in sensationalism and of its essential tendency to materialism and atheism. They are like Milton's "tawny lion pawing to get free

his hinder parts," or as an earlier writer, using the same allusion to the fabled emergence of animals from the slime, more vigorously expressed it, "their hinder parts are yet plain mud."

Plato must not be classed with these. Although he does not treat Duty or the Right as a primary idea, and attempts to derive it from the idea of the good, yet it must be borne in mind that he regards the Good as including in itself the unity of the True and the Beautiful, and thus determines it by a rational standard. Hence with entire consistency he argues, as in the *Philebus* and the *Gorgias*, that enjoyment or pleasure does not constitute the Good. Plato's error is that he attempts to develop the idea of the Right from that of the Good instead of immediately recognizing truth as law to the will. This error has made his ethics indefinite, confused and vacillating.

In any correct idea of the good or well-being of man two elements must be recognized, enjoyment which we know by experience, and the standard of truth, right and perfection, which we know in the light of Reason.

II. The maxim of Hedonism that the one ultimate motive of all human action is the desire of happiness is contrary to fact. This is a sort of fundamental maxim with the advocates of this theory which they set forth as self-evident; "Happiness our being's end and aim." Bentham in the *Deontology* says: "No man ever had, can or could have a motive different from the pursuit of pleasure or the avoidance of pain." But this extravagant assertion is in direct contradiction to the most common and obvious facts of human nature.

1. Every appetite, desire, affection or motive of whatever kind has its own specific object, and is not resolvable into the desire of happiness; this desire for the object is prerequisite to the possibility of finding enjoyment in the object. Hunger, for example, is the appetite for food, not the desire for happiness. When I have no appetite for food I have no pleasure in eating. My desire of happiness is as strong as ever. Why then do I not eat? What has changed? Not my desire of happiness, but my appetite for food. The same is true of all the sensibilities which are motives to action. Each has its own peculiar object; that peculiar object alone and no other can satisfy it; when a child is hungry its hunger cannot be appeased with a rattle.

2. Hence the motives to human action are many, not one alone. They who believe that man's good or well-being consists only in enjoyments distinguishable only in degree, reduce human nature to a dreary monotony, moved always by one and the same impulse, the desire of happiness. On the contrary the motives of human action are of many kinds:—appetites, desires, affections, affinities, antipathies, preferences, instinctive and rational, constitutional and acquired, involuntary and

voluntary, and each kind including many particular motives, each impelling to some peculiar object of its own. Herein consists the many-sidedness of man, his susceptibility to a great variety of impressions and influences, and his capacity for a complex and many-sided development and a complex and many-sided civilization.

3. It should also be noticed that any one of these appetites, desires or affections, by transient excitement or confirmed habit, may gain ascendancy and lead to sacrifice the objects of every other desire. A drunkard sacrifices health, property and reputation for drink. A miser sacrifices every comfort of life that he may hoard. Louise Michell, tried for participation in the crimes of the commune in Paris, gloried before her judges in the atrocities which she had committed and challenged them to put her to death. "What I ask of you," she cried, "is a place on the field of Satory by the side of our dear condemned brother. If you do not shoot me you are a pack of cowards." "In delivering these words," we are told in a narrative of the trial, "her whole figure shook with passion, her voice rang forth like a trumpet, and she looked the very image of an inspired fury." Louise was an atheist; she had no expectation of happiness after the fatal shot; she was ready to sacrifice life and all possibilities of pleasure in her fury against society. Her fury had wrapt her whole being in its blaze, licking up with its tongues of fire every other passion and interest as fuel. Similar are the stories of Charlotte Corday who murdered Marat, and of the Russian Nihilists. And yet we are asked to believe that all these devoted themselves to death in the commission of these crimes solely from the desire of happiness.

The desire of happiness is one among the many motives of human action. No man can prefer pain to pleasure, if pain and pleasure are the only objects compared. If he accepts pain in any case it is because he yields to some other motive. It is contrary to the most obvious and familiar facts of psychology to affirm that the desire of happiness is the one only ultimate motive of human action.

4. This reduction of all human action to one motive is incompatible with free-will. If man is constituted with susceptibility to only one motive, he has no power of free choice. He must follow that one impulse as necessarily as a brute follows the strongest impulse of his nature. Free choice is determination between different objects to which we are impelled by different motives.

5. The Hedonistic maxim is also incompatible with the fact that happiness has no fixed dependence on outward objects, but is relative to and dependent on the subjective state of the man himself. We do not desire any object because it imparts happiness; but the object imparts happiness because we desire it.

The Hedonist may reply to the arguments which I have been presenting that he does not mean that happiness is the only motive of human action, but that it is the ultimate motive; we admit, he may say, that every feeling which moves man to action has its peculiar and specific object, and that thus man is influenced by many motives; but we affirm that in all these the ultimate motive is the enjoyment which is to result. The point which I now make is that the Hedonistic maxim as thus explained is still in direct contradiction to obvious and fundamental facts in the constitution and action of man. For the happiness does not exist as an antecedent objective reality, but is itself the result of the man's own desire or choice of the object. Happiness is the smile that beams on the gratification of desire. As a man is not happy in order to smile, but smiles because he is happy already, so a man does not desire and choose an object in order to be happy; but he is happy in the object because he desires and chooses it.

Happiness is not bottled up in outward things, so much happiness in a house and grounds, so much in horses and equipage, and whoever gets the object gets the same definite amount of enjoyment. But whether a person finds any enjoyment whatever in an object depends on the state of his own heart towards it.

Hence every new affection opens a new source of enjoyment. Here is a young man whose present enjoyment consists in spending his earnings in clothing, horses and the like. By and by the love of wife and children is in his heart, and that new love has opened to him new motives of action, new objects of interest, new sources of enjoyment, a new world in which to expatiate. He is born again into a new life. Or he travels and becomes interested in art; he studies botany and becomes interested in plants, or geology and becomes interested in the structure of the earth; or he identifies himself with some moral reform or some political party; and each new motive opens a new world of joy, a spring of living water flowing out of the man and clothing with verdure and fertility what to him had been a desert.

And in many cases of this kind, what, after the new love has sprung up, is a source of joy, had been before disgusting; a boy who hates to study may become afterwards a lover of learning; a debauchee, to whom a sober and religious life is repulsive, may come to love God, to rejoice in sobriety, purity, beneficence and devotion, while his former debauchery in its turn becomes disgusting. As Paul describes his own experience in his conversion, what he had regarded as loss became gain, and what he had regarded as gain became loss.

Evidently in these cases it is not the enjoyment which kindles the desire or affection or choice, but the desire, affection or choice which

kindles the enjoyment. Happiness, therefore, cannot be the ultimate motive of all action.*

III. The Hedonistic maxim that all pleasures are of the same kind and equal worth, and are distinguishable only by their degree of intensity, continuity and duration, is contrary to the facts of human nature and action.

1. Since happiness does not exist in objective reality, but is wholly relative to and dependent on the subjective state of the person, enjoyments must be discriminated from each other and cannot be grouped together as of the same kind.

They must be distinguished by their subjective sources. The enjoyments arising from gluttony, drunkenness and licentiousness are not the same in kind with those arising from intellectual discovery, virtuous character and the achievements of Christian beneficence. The joys of sin are not like the joys of holiness. The joy of communing with a harlot is not the same with the joy of communing with God. The joy of miserliness is not the same with the joy of beneficence. It would be impossible to convince a converted debauchee that the pleasures of his debauchery, the remembrance of which fills him with shuddering and disgust, were the same in kind with the pleasures of his present sobriety, industry and piety.

Pleasures are also discriminated by their tendency. They are motives. The drunkard's enjoyments are a stimulus to new excesses. The sinner's pleasure in sin impels him on in sinning. By his own preference and choice he gravitates downward; he finds his happiness in sin; he regards it as his good; he thinks it impossible to enjoy a life of virtue

* Pres. Edwards says: "Some say that all love arises from self-love; and that it is impossible in the nature of things for any man to have any love to God or any other being but that love to himself must be the foundation of it. But I humbly suppose that it is for want of consideration that they say so. They argue that whoever loves God and so desires his glory or the enjoyment of him, desires these things as his own happiness. The glory of God and the beholding and enjoying his perfections are considered as things agreeable to him, tending to make him happy. And so they say it is through self-love or a desire of his own happiness that he desires God should be glorified and desires to behold and enjoy his glorious perfections. There is no doubt that *after* God's glory and beholding his perfections are become so agreeable to him, he will desire them as his own happiness. But how came these things to be so agreeable to him that he esteems it his highest happiness to glorify God? Is not this the *fruit of love*? Must not a man first love God and have his heart united to him, before he will esteem God's good his own, and before he will desire the glorifying of God as his own happiness? It is not strong arguing that, because after a man has his heart united to God in love and, as a fruit of this, desires God's glory as his own happiness, therefore a desire of his own happiness must needs be the cause and foundation of his love; unless it be strong reasoning that because a father begat a son, therefore his son certainly begat him."

and godliness. He "cannot see the kingdom of heaven." With his eager joy in sin he stoops downward as he runs and his "steps take hold on hell." But the Christian's joy is an impulse to Christian service, an inspiration for good, a strengthening of faith and love; it gives wings to bear him nearer to God.

2. Enjoyments are not essentially good, but may be evil. That a person is happy is no proof of his well-being.

Because they are inseparable from the subjective state of the person, enjoyments cannot of themselves alone constitute the good or well-being of a man. The character of the person which makes the enjoyment possible must be an element in the good. As Tennyson says, "Better fifty years of Europe than a cycle of Cathay." When a man enjoys to-day what disgusts him to-morrow, when one enjoys what disgusts another, these joys cannot be alike and indiscriminately the good or well-being of man.

Pleasure therefore may be evil and not good. The pleasure which breathes from an evil character and which would give place to sorrow if the character were good, cannot be good, but must itself be evil. The pleasure which impels the sinner to more wickedness, which precludes the capacity of joy in right living, which the sinner chooses as his good and so brings on himself the woe pronounced on those who call evil good and good evil, this pleasure is not good, but evil. The sinner finding his enjoyment in this may fitly exclaim with Milton's Satan,

"All good to me is lost; evil be thou my good."

The worst evil of sin is the joy which the sinner feels in it.

3. Enjoyments must also be distinguished as to their essential worth.

Man is a rational being. In the normal development of his constitution he has the fundamental ideas of reason, Truth, Law and Perfection. Any theory of human life which ignores this great fact must be fundamentally wrong. It is only by rigidly excluding all cognizance of this fact that it is possible to regard all pleasure as of the same quality, dignity and worth.

4. Accordingly the common sense of mankind rejects the doctrine. It is impossible to attach the same quality, dignity and worth to the pleasure of a pig with one foot in the trough, and the joy of Archimedes shouting *Eureka*, at a discovery of the method of ascertaining specific gravity; to the maudlin happiness of a drunken man and the solemn ecstasy of Kepler, when he exclaimed, "Oh, God, I read thy thoughts after thee;" to the joy of a pinched and skinny miser and the enthusiasm of a Raphael putting the creations of his genius on the canvas; to the devilish glee of Nero in his atrocities and the

joy of Paul suffering the loss of all things in his labor to save his fellow-men and his rapture in his dungeon triumphant in the face of a bloody death. The Hedonistic doctrine that all these joys are of the same quality and distinguishable only in quantity is contrary to reason and common sense. It does violence also to the deepest and best sentiments of the human heart, which rise in indignation against it. As John Locke said that the love of virtue is the same in kind with the love of grapes, this theory degrades the loftiest of human joys to the level of swinish enjoyment; it pours them all into the same barrel to be measured out by the painful like swill. If this theory were true, then, as Plato twice intimates, it would be wise for a man to catch the itch for the pleasure of scratching.* And the pleasure of Sidney Smith's cattle, rubbing their backs under the sloping pole which he had contrived to accommodate them all from the smallest calf to the tallest ox, would be the same in kind with the amused and kindly gratification of their owner in seeing the happy effects of his contrivance.

In fact it is according to the common consent of mankind that pains and sorrows may be of more dignity and worth than joys. Witness the universal admiration of Rebekah in Scott's *Ivanhoe* as she stood on the summit of the tower ready to fling herself down; of Leonidas and his Spartans giving their lives for their country; of John Howard visiting the prisons of all Europe and finally sacrificing his life to reform their discipline. Even J. S. Mill, though himself a Utilitarian, is obliged to confess, "It is better to be a human being dissatisfied than to be a pig satisfied; better to be Socrates dissatisfied than a fool satisfied."† This is the admission that other elements than happiness enter into the idea of the good. Mr. Mulford truly and forcibly says, "There has been no nation but in the beginnings of its history there was a consciousness of a relation to a world which it did not conquer with its swords and whose fruits it did not gather in its barns nor exchange in its markets. There has been none which, in the greater periods of its history, did not recognize ends whose worth had no estimate in material values, and in the crises of its history did not call for an effort for which its economists could find no rate of compensation in the wages of labor."‡

IV. Hedonism gives no available test for discriminating the superior from the inferior good, even according to its own principle that enjoyments are to be compared only by quantity or degree of intensity, continuity and duration.

It is impossible to determine by observation what will give the most

* Gorgias, 494. Philebus, 46.

† Utilitarianism, p. 42.

‡ Republic of God, p. 99.

happiness during the whole of existence. We cannot see into the future; and so complicated and far-reaching are the influences and results of our actions that no one can determine empirically what the aggregate effect on his happiness will be.

Another reason is the fact that happiness depends on a person's desires and preferences; what a person enjoys with his present character, tastes and preferences, he may presently, through a change in himself, become incapable of enjoying; hence he may prefer what is really evil to what is really good, and may find all the enjoyment of which he is now capable in the evil and be incapable of enjoying the good.

This theory gives no test for distinguishing the superior from the inferior good, or for determining what course of action will insure the highest good. Thus it fails in distinguishing enjoyments as to their quantity as really as it fails to distinguish them as to quality, dignity and worth. In either case the only criterion is in the principles, laws and ideals of reason. Whatever accords with these is at once the true and the highest good. This is a test always present and available.

V. Hedonism is incompatible with any fundamental and essential distinction of right and wrong. It attempts to derive the idea of right from that of happiness. But the idea of right cannot be developed from the idea of happiness. Hedonism, starting with the idea of the good as consisting in indiscriminate enjoyment, can never lift itself out of that idea to the idea of right and law. It must stick inextricably in the idea of the pleasurable and the expedient. This, however, is not the place to consider the ethical bearing of this theory.

§ 49. The Good Estimated by the Standard of Reason.

I. The rational standard or criterion by which the good is ascertained and distinguished from evil is the truths, laws and ideals of reason. I cannot begin with the fact of enjoyment and say, "I enjoy this, therefore it is good." I must bring the objects, achievements and acquisitions which are the sources of joy into the light of reason and in that light approve or disapprove them and the happiness which they occasion.

Thus the answer to the question, "What is the Good?" is analogous to the answers to the questions, "What is the True, the Right, the Perfect?"

It has been shown in respect to each of the three that the attempt to develop them from the feelings fails to give any real distinction between the true and the absurd, the right and the wrong, the perfect and the imperfect, and even to attain the ideas of truth, law and perfection. The same is true of the distinction of good and evil. It cannot be

determined from the feelings, but only from the reason. So Kant affirms: "Heteronomy and a falsification of the moral principles is the inevitable result if, without regard to the law, any object is chosen under the name of good and allowed to determine the will, so that from it the highest principle of practice is deduced."

II. The rational idea of the good determined by this standard is the idea of dignity, worthiness or worth. This is an ultimate idea of the reason of the same order with the True, the Right and the Perfect. In it is opened a reality which, but for man's constitutional capacity of rational intuition, would have remained utterly inconceivable and unknown.

The good, rationally estimated, is more than enjoyment. It is any object which can be acquired, possessed and used, any source of enjoyment and the enjoyment resulting, which reason approves as worthy of the pursuit of a rational being. Reason judges that the man acts worthily of himself as rational in seeking the object and deriving enjoyment from it; it judges that the object has dignity and worth; is worthy to be an object of pursuit and a source of enjoyment to a rational being.

Necessarily the good of any being must be in harmony with the constitution of the being. It cannot be for the good of a fish to be taken out of the water. Man is constituted rational. His good must be accordant with his rational constitution. Among all objects which may be desired, possessed and enjoyed, those only are good which reason declares worthy to be desired, possessed and enjoyed by a rational being. If a man gains the whole world at the expense of his own spiritual integrity and perfection, the gain is not worth the expenditure; it is evil and not good. When Raphael expends life putting the creations of his genius on the canvas, or Newton or Kepler in exploring the heavens, or Paul in building up Christian churches, reason approves of the object as having dignity and worth, and sees, as the Creator saw his own works in the beginning, that it is good. But if any man lives selfishly in rapacity and prodigality, or in rapacity and miserliness, or in fraud or violence using others for his own aggrandizement, or in idleness and luxury, reason condemns his ends, his acquisitions, his achievements and his joy therein, as unworthy of a rational being, and pronounces it shameful that he should spend his powers and find his enjoyments in such pursuits. A reasonable contempt for a life of selfish enjoyment is uttered by Froude, in reference to a sentiment of some political economists that an idle and luxurious class is a benefit to society by stimulating the young to seek a similar success: "They are like Olympian gods, condescending to show themselves in their empyrean and to say to their worshippers, 'Make money, money enough, and

ye shall be as we are, and shoot grouse and drink champagne all the days of your lives.' " * And our approval and condemnation as worthy or unworthy in such cases is immediate and decisive, and independent of the greater or less amount of pleasure.

III. The rational idea of the Good, as that which, measured by the standard of reason, has dignity and worth, presupposes the ideas of the True, the Right and the Perfect. Each of the four is distinct from the others, but there is an order of precedence and dependence in their origination. The idea of the True presupposes no rational idea. Law or right presupposes the idea of Truth. What is true to reason is a law to action. The Perfect presupposes the ideas of truth and law. The Good presupposes, not only the knowledge in experience of joy and sorrow, but also the ideas of the true, the right and the perfect as the standard by which we discriminate among joys and their sources as worthy or unworthy of the pursuit of a rational being, as having worth or being worthless.

IV. The distinction between good and evil as determined by reason is eternal and immutable, like the distinction between the true and the absurd, the right and the wrong, the perfect and the imperfect. It must be so because the standard by which it is measured is so. Hence the principles, laws and ideals of Reason determine what good is possible in the universe. The possibility of good contrary to these is excluded by the eternal constitution of things; that is, by the fact that Reason is supreme and the universe is the expression of its eternal truths, laws and ideals. It is impossible for any power, even though almighty, to make any acquisition or any pleasure not accordant with reason to be good. Almightyness can no more make evil to be good than it can make the absurd true and real, the wrong right or the imperfect perfect. Hence the significance of the prophet's denunciation, "Wo unto them that call evil good and good evil; that put darkness for light and light for darkness." (Isa. 5: 20.)

V. The Good being distinct from the Right, any correct ethical philosophy must recognize and treat them as distinct. The confounding or identifying of the *Bene* and the *Recte* has been a common source of error in systems of morals. The love which is the fulfilment of the law must comprise both righteousness and benevolence, or, if both words had the Latin form, *Recte-volence* and *Bene-volence*.

VI. The good thus rationally determined, is not merely a superior good distinguished from the inferior good by quantity, but it is the true or real good or well-being, distinguished by worth from all that is falsely called good. As the true and real good it is of course the highest

* Inaugural Address at St. Andrew's, March 19, 1868.

good. Thus what the highest good is, is ascertained not empirically by measuring quantity, but rationally by the standard of reason.

VII. Distinguish *worth* as estimated by reason from *value* in Political Economy. The latter is measured by the demand for the article and the labor of producing it. Whatever amount of labor the article has cost, if there is no demand for it, it has no value in the market. On the other hand, it makes no difference as to value in exchange whether the demand for an article is wise or unwise, right or wrong. An article that is positively injurious, like intoxicating liquors, may have great value in the market.

On the other hand, worth as estimated by reason, is independent of the demand for it. It is that which wisdom and love demand, but which folly and sin may refuse. The greatest demand cannot impart worth to what is unreasonable and wrong. Nor does it depend on the amount of labor in producing it. What proportion is there between the amount of labor in producing Homer's Iliad, or Shakespeare's Hamlet, or Newton's or Kepler's discoveries, and their worth? The works of the great painters and sculptors have passed out of the market. They are preserved by princes and nations. No money can buy them. So wisdom is represented in the book of Job as having worth above all price. "Man knoweth not the price thereof. It cannot be gotten for gold, neither shall silver be weighed for the price thereof. It cannot be valued with the gold of Ophir, with the precious onyx or the sapphire. No mention shall be made of coral or pearls; the price of wisdom is above rubies." (Job 28: 12-19.) The same is the priceless worth of God's redeeming grace: "Ye were not redeemed with corruptible things, as silver and gold, but with the precious blood of Christ." (1 Pet. 1: 18.) It reveals a low estimate of a man to say he is worth a million of dollars, for it ranks him with marketable commodities. Christ says the worth of a man is more than that of a world. So simple a virtue as integrity we acknowledge to be of priceless worth, when we say of the upright man that the world does not contain gold enough to buy him. Says Kant: "Everything in the realm of ends has either a price or a dignity. That in the place of which an equivalent may be put, has a price; that which is above all price and admits not substitution by an equivalent, has a dignity (*Würde*)."*

It is true, however, that the idea of value arises and derives its significance from the fact that man has the idea of worth as estimated by reason. A brute cannot traffic. Hence political economy is an attempt to find a rational principle for determining value in exchange. And the principle that every legitimate transaction in business is an ex-

* Grundlegung zur Metaphysik der Sitten, p. 64.

change of equivalents or of equivalent services, rests on the rational ideas of justice and of the reciprocal relations and obligations of men in the community of a moral system. And language recognizes the reference to human welfare in calling articles of exchange *goods*.

VIII. The Good is the rational end or object of acquisition, possession and enjoyment. In knowing what the good is, we know the end or object approved by reason as worthy to be acquired, possessed and enjoyed by a rational being.

The question "*What is the Good?*" is not the primary and fundamental question of ethics. All knowledge is the knowledge of being. All action has being for its ultimate object. Moral character is primarily the choice of a being or beings as the supreme object of service; it is not the choice of an object to be acquired, possessed and enjoyed, but of a being or beings to be served. True ethics transcends the question as to the *summum bonum* or highest good, and passes over into an entirely different sphere of thought. The fundamental question of ethics is not, "*What shall I get?*" but it is, "*Whom shall I serve?*"

But when I have chosen the being or beings to whom I will devote my energies in service, the question arises, "*What service can I render?*" In answering this question we are obliged to ascertain what the good is; what object or end is worthy to be acquired, possessed and enjoyed by a rational being, whether it is acquired for himself or for another. What object to be acquired, possessed and enjoyed does reason declare to have true worth?

The good therefore is the rational end or object of acquisition, possession and enjoyment. It presupposes the true, the right and the perfect; it is that in which they culminate. Here opens to our investigation the sphere of rational ends of action. In the sphere of the good we find those rational ends of pursuit which satisfy our highest aspirations and may be put forward as constituting a full and sufficient reason for life itself. Here is the answer to the question, forced on this generation by materialistic denials of the ultimate realities of Reason; "*Is life worth living?*" Reason answers that in knowing the truth, obeying it as law, and realizing perfection man attains the Good, which has true and immutable worth and is worthy of the pursuit and enjoyment of rational beings. I shall sometimes call it, for short, the rational end or object, meaning, not the object of service, but the object approved by reason as worthy of being acquired, possessed and enjoyed. It is the true and right object of all acquisitive action on the part of a rational being.

It is this reality known by Reason which opens to knowledge the whole sphere of teleology or final causes. Reason asks, what is the true good of a rational being? and judges all things else in their relation to that.

It asks, what is it good for? of what use is it? What rational end does it subserve?

§ 50. In what the Good or Well-being of a Rational Being consists.

Thus far my definition of the good has been analogous to my definition of the right by the formal principle of the law. I have said that the good is that which is determined by a rational standard as having worth. But I have not said what it is which has this worth. This I now proceed to define; and the definition will be analogous to the definition of right in the real principle of the law. What is it which has in itself worth as estimated by reason; which is everywhere and always worthy of human acquisition and possession, and everywhere and always worthy to be the source of happiness to a rational being?

I. The essential good of a person is the perfection of his being; his consequent harmony with himself, with God the Supreme Reason, and with the constitution of the universe; and the happiness necessarily resulting.

1. The essential good is primarily the perfection of the being.

Man's acquisitions are not merely of external goods to be consumed for his enjoyment or used as instruments in accomplishing his ends. There are also excellences constituting the perfection of his being, which are to be acquired by his own action. This perfection is what he must primarily seek to acquire as the true good.

This is a necessary inference from what has been already established. The Good, which is the rational object of all acquisition, is itself the realization of the truths, laws and ideals of reason. So far as a man attains the perfection of his own being he attains the end which reason declares to have true worth; this is the end worthy of pursuit and acquisition for ourselves and for all beings.

The attainment of perfection must begin in the acquisition of right moral character. Character begins in choice. When a man chooses whom he will serve, he acquires moral character; the will is thenceforward a characterized will and all action thereafter develops, confirms or modifies the character. The moral law requires us to choose as the object of service God as supreme and our neighbor equally with ourselves. This choice is the essence and germ of the love to God and man which is the fulfilment of the law. It is the essential germ of all right character.

This right choice, constituting the germ of all right character, is good in itself and cannot be perverted to evil or made a means of evil. Knowledge, intellectual power, discipline and culture, vigor of body, all outward conditions and possessions may be used for evil. The

power of long foresight and of self-control may be used for evil; the cool-headed villain is the most dangerous villain. But the right choice cannot be perverted to evil; should it be overpowered and fail to carry out all its purposes, it is still good in itself:

“A noble aim faithfully kept is as a noble deed.”

Man in his power of choice can determine all his energies and possessions to the service of God and man, and thus to the realization of the universal good; or to the service of self and thus to the realization of evil. But the choice of God and man as the object of service is good in itself, good without qualification, good which can never be perverted to evil. So Kant says: “There is nothing in the world, and we cannot conceive of anything out of the world, which can be held to be good without qualification, except a good will. . . . This good will is good not on account of its effects or its fitness to accomplish any given end, but simply in itself, as a right choice or purpose. It is therefore to be prized incomparably higher for its own sake, than anything which comes to pass to gratify any desire or even all desires together. Even if the good will is unable to carry its purpose into execution, still the good will would remain, and it would have its worth in itself, like a jewel which glitters with its own luster. Success or failure neither adds to nor takes from this worth. These are like the setting of the gem, convenient for handling and setting it forth to notice, but unheeded by the lapidary in estimating its real worth.”*

Besides right moral character, the Good consists in the perfection of all the powers and susceptibilities of the being. It is physical, intellectual, moral and spiritual perfection. All action in accordance with the law of love tends to the development, discipline and culture of the man in the realization of this perfection.

And it can be realized *only* by action in accordance with the law of love. Should a person propose to himself his own perfection as the great object of acquisition and should he seek it only for his own aggrandizement and enjoyment, he would be serving himself supremely, not God and his neighbor; he would miss the perfection which he proposed to attain, and instead of its grandeur and blessedness would find himself shriveled in selfishness, and his whole sphere of interest and action, the whole firmament and horizon of his life shrunk within the bounds of what he can clasp within his own arms and hug to his own bosom. And here is the significance of the Saviour's paradox, “He that findeth his life shall lose it, and he that loseth his life for my sake shall find it.”

* Grundlegung zur Metaphysik der Sitten; Erster Abschnitt, pp. 11, 12, 13.

Goethe is a striking example of a man devoting his life to seeking his own culture with all the energy of commanding genius. Great as are the works of his genius, he missed that which is of highest worth, and the light of his intellect reveals more clearly his moral deficiencies. Intent on personal culture and enjoyment, he took little interest in the great political movements of his time, which were changing the destiny of Europe and America and affecting all the interests of humanity. In Napoleon's invasion he fawned on the conqueror of his people—unlike Fichte, who, as the enemy approached, dismissed his class with the inspiring words: "We shall resume these lectures in a free country." The track of his life was strewn with crushed and cast-off loves, like orange-peels thrown away after he had sucked out all the sweetness. Great and lustrous like an iceberg, floating deep and towering high, moving majestic with the strength and swell of the ocean, effulgent in the sunshine, a mountain of light, but also a mountain of ice. Plainly he never attained the true good. And this estimate of himself he himself pronounced, when in his old age he said: "I have ever been esteemed one of fortune's favorites; nor can I complain of the course my life has taken. Yet, truly, there has been nothing but toil and care; and now in my seventy-fifth year I may say that I have never had four weeks of genuine pleasure. The stone was ever to be rolled anew. My annals will testify to the truth of what I now say."* Contrast this with Paul's review of his life of self-sacrificing love: "I am now ready to be offered and the time of my departure is at hand: I have fought the good fight; I have finished the course; I have kept the faith: henceforth there is laid up for me a crown of righteousness, which the Lord, the righteous judge, will give me at that day."

There is no absolute perfection to a finite being, but only its perfection in its own kind and under its own necessary conditions. But man, endowed with reason and free-will, is capable of progress. While his moral character at a given point of time may be right, he is in culture and capacity capable of continual growth. His perfection, therefore, is not a resting in any attainment as a finality. The very fact of resting in knowledge or power acquired, or in good work done as a finality and satisfying sufficiency, would involve the cessation of activity, and the resting would be a rusting in routine, formalism and cant. The perfection of man involves continual growth. It is the condition of the growing tree, the tree of the Lord, which is full of sap, leafing, blooming, fruiting and growing from year to year, transforming the mold, the air, the water into its own organic substance, and thus glorifying itself with beauty and majesty; not a bark-bound tree, standing fruitless and

* Eckermann Conversations, January 27, 1824.

unblessed from year to year. It is the condition of immortal youth. In becoming as a little child, in order to enter the kingdom of heaven, the Christian becomes not only simple-minded, teachable and trustful as a child, but also acquires the perpetual youthfulness which we love to think of in the immortals, losing nothing of its freshness and buoyancy, its vigor and capacity of growth through the lapse of ages.

2. A person's Good consists in his harmony with himself, with God the Supreme Reason, and with the constitution of the universe. His will is in harmony with his Reason, and all his desires and passions under the power of love are brought into harmony with one another. He is in harmony with God. The universe, physical and spiritual, is the progressive expression or revelation of the archetypal thoughts of God. As such it must be good. Man is not an isolated ego and cannot work out his own good in independent individualism. He belongs to the universal system, physical and spiritual, and his well-being consists essentially in his harmony with the system of which he is a part, and with the Wisdom and Love which evermore are embodying themselves in it. Its Cosmic forces, acting on him every moment for good or evil, go on evermore above his reach and independent of his power. But if he reads aright the truths of his own reason, he reads in them also the truths of the supreme and universal reason. If he realizes the perfection of his own being, he knows that he is in harmony with the constitution of the moral and physical system and with the thought and design of the Supreme Reason energizing in it evermore for good. While, then, his own perfection constitutes primarily his good or well-being, it has this scope that it puts him in harmony with the constitution of the universe and with the wisdom and love and power ever energizing in it; and thus makes it sure that all the complicated and immeasurable agencies of the worlds of nature and of spirit will bring him blessing. "All things work together for good to them who love God."

3. A third essential constituent of good or well-being is the happiness flowing from the perfection of the person and from his harmony with himself, with God and with the constitution of things.

It may be objected that since happiness may arise from evil and be a motive to evil, it cannot belong of itself to the essential good. This is true. On the other hand, sorrow that comes necessarily from evil, may be a motive to forsake it. Such sorrows, for example, are remorse, the misery of self-conflict, the dissatisfaction with worldly acquisitions. The sorrow of repentance is good, although it could not have existed if the penitent had never sinned.

But happiness has no existence of itself and is always inseparable from its source in something else. The happiness which comes from

perfection is a constitutional and necessary issue of the perfection and inseparable from it. It is good in its source, and in all its influence as motive; for joy which springs from right character and action can be motive only to perpetuate and intensify them. Hence *this* joy, as inseparable from right character, is good and cannot be perverted to evil. It is inseparable from the perfection; if the supposed perfection issues in misery or even in insensibility, it is thus proved not to be perfection.

Capacity for enjoyment is a part of man's constitution. As he makes progress towards perfection this capacity cannot be diminished or destroyed, but must be itself progressively perfected. Incapacity for enjoyment is itself an imperfection. A man thus incapacitated would be as far from perfection as from good. In the experience of enjoyment the idea of good originates. The rational estimate in which the idea of worth arises is itself an estimate of objects which, as desired or chosen, are sources of enjoyment, and between which the reason judges which are worthy and which unworthy. Enjoyment, therefore, is an essential constituent in good or well-being. The rational idea of worth and the empirical element of enjoyment are inseparable in the idea of the good. The good is that which is a source of enjoyment and at the same time has worth; that is, in the estimate of reason it is worthy to be the source of a rational person's happiness. The good is the perfection and harmony of the rational being, and the happiness indissolubly united with it.

Besides, since the sources of happiness depend on the subjective state of the man, when the man is perfect, the enjoyment which is peculiar to his perfection must flow from it spontaneously and necessarily. As a miser spontaneously and necessarily enjoys hoarding, one who loves his neighbor as himself must enjoy beneficence, and one who loves truth must enjoy discovering it. The same is true of all perfection; the happiness peculiar to it is as inseparable from it as brightness is from sunshine. Joys from other sources may cease; pain and sorrow from other sources may be suffered; but the joy peculiar to perfection flows from it spontaneously and necessarily; no circumstances alter it, no outward conditions check it; it remains always unchanged. This may be exemplified in the enjoyment of health, which is the perfect condition of the body. The healthy man may be poor, or despised, or rich, or honored; he may be ignorant or learned, malevolent or benevolent; but the freshness, the elasticity, the courage, the energy of perfect health, and all the glow and joy incident to it remain the same. The same is true of the joy of intellectual culture, of æsthetic taste, of moral excellence, and of religious faith and love. The man may encounter adversity in a thousand forms, but the joy peculiar to these high quali-

ties flows spontaneously and necessarily without stint. In fact the privation of joys from other sources seems often to enhance these higher joys. Paul awaiting death in the Mamertine or some other Roman dungeon utters the grandest of all his expressions of Christian exultation. The man who hungers and thirsts after righteousness is blessed in the righteousness. This it is, his own righteousness, his own love to God and man, which is "in him a well of water springing up unto eternal life." This is the significance of our Saviour's words, "Whosoever drinketh of the water that I shall give him, shall never thirst."

4. These three essential constituents of the Good are distinguishable in thought, but inseparable in fact. No one of the three exists without the others; the existence of one implies the existence of the others. In the perfection of his being a person is necessarily in harmony with the wisdom and love of God, and with the constitution of the universe, spiritual and physical, which is the ever-progressive expression of that wisdom and love. And this perfection and harmony spontaneously and necessarily glow with their own peculiar joy, and thus constitute the blessedness of the righteous. This is the Good; it is one and not three; it is three in one. It is good in itself; good in the sources of its joy; good in all its outcome and tendencies.

This is exemplified in moral character. Moral perfection is perfect love. In the life of love the moral perfection of the individual and the harmony of his personal character with the universal moral system are united. This love beams with its own inextinguishable joy—joy which is no more to be destroyed by sufferings inflicted by wicked men or any evils of outward origin than the light of the stars is blown out by earthly storms. So Jesus says: "And your joy no one taketh away from you."

5. Hence any theory which, like that of the Stoics, excludes happiness from the essence of well-being or the Good, excludes one of the two elements essential to the distinctive significance of the idea..

Stoicism, excluding happiness, the element of the Good empirically known, contradicts common sense and sets itself in antagonism to human nature. It aims to extirpate man's nature, not to regulate it. It sets forth virtue as a bald purpose to obey rational law, defecated from all feeling. Hence has arisen the error that virtue is greater in proportion to the reluctance of feeling which it overcomes; that the enjoyment of doing duty vitiates the virtue of doing it. This is exemplified in the lady who said to Herbert Spencer, concerning an acquaintance, "I really think she does things because she likes to do them," "the form of expression and the manner both implying the belief not only that such behavior is wrong, but also that every one

must recognize it as wrong."* The same is ridiculed in Schiller's *Scruple of Conscience and its Answer*:

"The friends whom I love I gladly would serve,
But to this inclination excites me:
And so I am forced from virtue to swerve,
Since my act, through affection, delights me.

"The friends whom thou lovest thou must first seek to scorn,
For to no other way can I guide thee:
'Tis alone with disgust thou canst rightly perform
The acts to which duty would lead thee."

And it is only against this type of philosophy that the strongest arguments for Hedonism have force. Thus Bentham, in his coarse style, says: "The *summum bonum*, the sovereign good—what is it? It is this thing, it is that thing, and the other thing; it is anything but *pleasure*; it is the Irishman's apple-pie made of nothing but quinces." "Another set cry out: 'The habit of virtue is the *summum bonum*.' . . . Lie all your life long in bed, with the rheumatism in your loins, the stone in your bladder, and the gout in your feet:—have but the habit of virtue and you have the *summum bonum*. Much good may it do you."†

On the other hand, the Hedonists exclude from the good, worth or worthiness, the other of the two elements essential to its distinctive significance. The Stoic excludes happiness, the element given empirically in experience, and proposes the impossible virtue of a passionless Reason, doing duty in stern apathy. The Hedonist excludes worth or worthiness, the rational element given by reason, and turns the man out to seek pleasure of whatever kind, sending him into the fields to feed with the swine.

Christian ethics recognizes both elements in their true relation and unity; it welcomes the man with joy as a son of God to the love and purity and blessedness of his father's house.

II. Whatever circumstances, conditions or possessions contribute to the essential good already defined, are relative good. Such are food, raiment, houses, lands, machinery, tools, positions of honor and authority, and the like. These are *useful*. But utility determines nothing as to the good; for things may be useful for evil as well as for good. They are good relatively, that is, when they contribute to the essential good. Our Lord recognizes them as relatively good: "Your heavenly Father knoweth that ye have need of all these things." The common sin of man is setting the heart on the relative good and forgetting the essential. But it is no good except as related to the essential good; and so

* Data of Ethics, p. 111, chap. vii., § 43.

† Deontology, chap. iii.

many a worldling by sorrowful experience has found it. When these things cease to subserve the higher end they cease to be good and may be cheerfully given up.

III. The essential evil is the contrary of the good. It must be the distemper, perversion and vitiation of the being; the discord or conflict of the man with himself, with God and with the rational constitution of the universe; and the unhappiness resulting. As the perfection of the being begins with right moral character, so the vitiation of the being begins with wrong moral character. As right character is primarily and essentially love to God and man, so the wrong character is primarily and essentially selfishness, or the choice of self as the supreme object of service.

Then we properly say that sin is the essential evil, evil without qualification, evil which can under no circumstances be good or the means of good. It is evil and only evil continually. As a man continues to act in sin he corrupts and disorders his being, and comes into conflict with himself, with God and with the constitution of things.

All outward conditions, circumstances and possessions, all powers, knowledge, discipline and culture of the man, when used for evil ends become relatively evil. Hence it is of the essence of sin to change what otherwise would be good into evil as related to the sinner, overcoming good with evil; so that the law and grace of God, being resisted and abused, are transformed for the sinner from good to evil, from a blessing to a curse. All things work for evil to him. And, further, what is evil the sinner chooses as good. He chooses it as good because it gratifies his evil desires; but it is to him as a worm that never dies and a fire that is not quenched. He loses himself and is cast away, missing all the legitimate ends for which a rational being should exist.

The existence of sinners implies the existence of a society or kingdom of wickedness, recognized in the Bible as the kingdom of Satan or the power of darkness. This kingdom is in direct antagonism to the kingdom of God, and the kingdom of God is in antagonism to it. It is the antagonism of love and selfishness. This power of evil confronts and opposes the man who in the life of love is trying to attain good for himself and all mankind. From it come on him temptation to sin, power of delusion and deceit, hindrance and often frustration of his beneficent plans, and sometimes violence despoiling him of his possessions and inflicting on him torture, imprisonment or death. This power of evil does not belong to the constitution of things, except so far as the existence of finite free agents belongs to the constitution of things. It comes into being, not by the act of God, but by the action of free agents sinning against God, by their own choice putting themselves in antagonism to the truth and law, the wisdom and love of God, and by their

selfish characters and action doing what in them lies to hinder the universal good, to frustrate all efforts to promote it, and so to multiply evil.

Right character does not bring man into harmony with these powers of evil, but into antagonism to them. Their opposition may retard the progress of truth, righteousness and good-will; but it cannot diminish the good realized by the man himself who faithfully serves God in the face of all injury. His very fidelity strengthens his right character, helps to develop his being to its perfection, and multiplies the blessings which come on him from God's grace.

Apparently there is also evil which comes on man from the course of nature. The miasma which moves undetected by any sense, "the pestilence that walketh in darkness," tornadoes, drouth and floods, untimely heat and cold, cosmic influences of many kinds bring evil which comes alike on the righteous and the wicked and which no skill of man is at present able to avert. Certainly the kingdom of nature does not yet seem to be in harmony with God's kingdom of grace. Here again it is true that cosmic agencies, however irresistible, have no power to harm the righteous man himself, but only help on his development, discipline him to wisdom and strength, and so aid him in realizing the true good. Yet we may reasonably expect that a more immediate harmony of cosmic agencies with beneficent spiritual influences will be realized. Man is appointed to be the lord of nature, and by his progress in knowledge and power he is subduing and civilizing the savage earth, learning the laws of cosmic forces, and acquiring skill to protect himself from their pernicious effects and even to control them and subject them to his service. And we know not to what extent this civilization and subjection of nature may be carried or whether there will be any limit to its progress. Nor do we know what cosmic changes await the universe in the future. The Bible, however, clearly intimates, in its glimpses of the new heaven and the new earth wherein dwelleth righteousness, a future harmony between the kingdom of nature and the kingdom of grace.

IV. A man's good is put in his own power. The essential good and the essential evil are primarily within the man and dependent on his own choice and action. And this determines whether the action of outward agencies on him will be beneficent or hurtful. If his character is right, then he will so meet all outward influences as to advance his discipline, culture and education, and the development of his being to its perfection and the realization of good. If he persists in a wrong character and action, all outward agencies in like manner accelerate the perversion of his being and the realization of evil. It is so in nature. The sunshine, as it issues from the sun, is full of blessing. But whether

it brings good or evil depends on the receptivity of that on which it falls. When it falls on cultivated ground full of good seeds it quickens it into fruitfulness and beauty; when it falls on a malarial swamp it quickens it to pestilence and death; when it falls on the barren sands of Sahara they only glow in their barrenness with a fiercer heat. God is the eternal fullness of wisdom and love overflowing with good into the universe, pouring through all his works of nature and providence, of law and grace, and free to every one who comes into harmony with the wisdom and the love and so becomes capable of receiving the ever-flowing good. A man's own free choice is the key which opens the flood-gates and lets the divine goodness pour through his life and flood it with blessing.

God himself is eternally blessed in the perfection of his own being; and he expresses his wisdom and love in finite things. Man, by coming into harmony with God and with the divine wisdom and love which are expressed in the universe and are the constitution of things, becomes a participator in the true good. He is blessed in himself and receives blessing from God and from all that exists. He is not the creator or originator of good, but the participator in the good that is eternal. He has the peace of *God* which passeth all understanding; blessedness in himself, in God and all God's works, like the blessedness of God himself—that blessedness which is peculiar to rational persons in the perfection of their being, in the rightness of all their doings, and their harmony with eternal wisdom and love. Evil, on the contrary, is not eternal; it is created or originated by finite rational beings; it is subjective, personal and local; it is contingent on the action of finite wills, and so dependent for its existence on individual sinners; and in the entire moral system sporadic and exceptional.

Here is an additional evidence that happiness alone is not "our being's end and aim." For if so, the end would have been more surely attained if man had been left to the guidance of instinct only; for this guidance, so far as it reaches, is unerring. The fact that man is endowed with reason and free-will is proof that he exists for some higher end than pleasure. In the light of reason he must with careful consideration compare the sources of enjoyment and estimate their worth; and by rejecting this and choosing that, by resisting and regulating his impulses, by substituting for the evil which he desires the good which reason estimates to have worth, by overcoming evil with good, he is to cultivate and develop himself, and in his own perfection attain his true good and at the same time accomplish his true work of love to others.

A rational being is always to be served, never to be acquired, possessed and used. He is always an end, never an instrument or tool.

This is accordant with the dignity of a rational being; by realizing his own ideals he finds his true good, and finds it within himself. Hence it is involved in his personality that he is an *end* and not a means, a person to be served, not a thing to be used. Hence he is never to be possessed and used by others for their ends, but to be helped by them in a service of righteousness and benevolence in accomplishing his perfection and well-being. Even Society in its organic capacity may not *use* him for its own ends, but, while commanding his free and intelligent service, must itself seek his good in rendering to him the service of righteousness and good-will. For government is "a minister of God for good" to the governed; and the well-being of society can be advanced *only* in proportion as the individuals composing it attain their own well-being in their own personal perfection.

This general conception of the good is presented with poetic beauty in the first Psalm. The blessedness of man is found within himself; it is the perfection of his being and the right doing of his work; it is what he is and does rather than what he gets. Such a man is like a tree planted by the rivers of water. It is immaterial to the growth of a tree whether it stand in the garden of a hut or a palace. Of all that is put on the ground around it only that is of service which it can take up into itself and organize into its own substance. So all that is external contributes to the good of a man only so far as it contributes to his growth and fruitfulness; only so far as he takes it up into himself and makes it help his own development and give scope and efficiency to his work of love. The Psalm represents the tree as in a garden, watered by artificial canals. So man's blessedness does not grow wild; it is the result of painstaking culture, appropriating God's sufficient grace, the ever full and flowing river of water of life.

§ 51. Merit and Demerit.

I. When a man chooses and acts in accordance with the truths, laws and ideals of reason, we know by an intuition of reason that he is worthy to have the true good. In this course of action and in seeking these ends reason judges him worthy of the approval of himself and of all rational beings; worthy of the favor of God; worthy of all the good which the universe can give him; worthy to be "heir of all things." And this is true of every rational being thus living; for by virtue of his personality he has his end and his good in himself; all beings are to minister to him in securing that end and good; and when through the man Christ Jesus he is lifted from condemnation and sin and brought to put himself by his own free determination into harmony with God and the constitution of things, then in very deed he becomes with Christ "heir of all things," "heir of God and joint heir with Christ;" then he

"reigns with Christ," who, by lifting him out of his sins into harmony with God, has in very deed "put all things in subjection under his feet," has made the "angels minister to him as heir of salvation" and "all things work together for his good." Every rational being who is in harmony with God, the supreme Reason, is entitled by the prerogative of reason to use all irrational things and to receive the willing service of all rational beings in attaining his own perfection and good.

If, on the contrary, a man is living in antagonism to the truths, laws and ideals of reason, reason pronounces him unworthy of the good, worthy only of the evil.

The worthiness of good, thus adjudged by reason, is called *merit* and the unworthiness of good is called *demerit*. The word desert is common to both; as one deserves well or ill. Merit is sometimes used to denote the desert of evil; as we say, a criminal merits his punishment. The noun *merit*, however, is commonly used to denote the desert of good.

II. We necessarily believe that whoever chooses and acts in accordance with the truths, laws and ideals of reason will certainly attain the true good; he will not merely merit it, but will attain it. Every one who seeks will find.

1. This is involved in the fact that reason is supreme in the universe. Under the benign government of perfect reason ordering the universe in wisdom and love, every one whose ends and acts are accordant with reason must be blessed. If the universe is so constituted and governed that character and action perfectly wise and right may issue in evil, and character and action altogether unwise and wrong may issue in good, it would contradict our deepest moral convictions, subvert all moral law and confound all moral distinctions; the principles, laws and ideals of reason would have no reality, and the universe would be founded in unreason. If we trust reason at all, we must trust it as supreme. So trusting, we must believe that he who seeks ends which reason estimates as having true worth, will find the true and highest good. This is the rational optimism.

But, further, action in harmony with reason realizes the true good, because it insures perfection of the being and the harmony of the being with the constitution of things, and because the happiness peculiar to these issues spontaneously; and these constitute the essential good.

And thus all external conditions are made into relative good. If a man experiences pain, loss, disappointment, persecution, death, whatever evils may assail a man from without, by meeting them in wisdom and love he develops himself towards perfection, and so transforms the evil into good. Scientific lecturers picture an immense cylinder of ice moving with great velocity into the sun, and tell us that it would instantly be not only melted but burned, contributing to increase the heat and

brightness of the sun. So all evils make the man, whose life is in harmony with reason, wiser, purer and stronger, and so promote his good.

2. Thus, even in this life, every right act receives immediately and invariably its reward in securing to the agent his good or true well-being, and every wrong act its punishment by bringing on the agent evil.

3. The objection that the world is not governed by a righteous God, because good and evil are distributed with no regard to character, is founded only on a false conception of what the good is. It is wealth, and honor among men, and the like which are distributed without regard to character. But God is poor indeed if he has no good higher and more essentially good than these.

"Wealth on the vilest often is bestowed
To show its vileness in the sight of God."

God rewards his servants with the durable riches of righteousness. He forms them into his own likeness; quickens them to love and serve like Christ, and thus makes them capable of godlike joys and the blessedness of the kingdom of heaven. That kingdom he that is not born of God into the life of love cannot enter, cannot enjoy, and, for so our Lord says, cannot even see.

4. The true good as estimated by reason is the highest good. Although it is impossible empirically to determine what course of action will yield the greatest intensity, continuity and duration of enjoyment, yet we can determine it by the rational standard. Whoever follows implicitly the guidance of reason and conscience knows that he is insuring his own highest good, even when for the time being his action subjects him to privation and suffering. This is evident from the whole course of the foregoing discussion.

§ 52. The Feelings Pertaining to the Idea of the Good.

I. The feelings pertaining to the rational idea of the Good presuppose the idea. I am not speaking of enjoyment, which belongs also with the natural emotions; but of feelings pertaining to the rational idea distinctively. We do not derive the rational idea of worth from our feelings, but the feelings presuppose the idea and are occasioned by it. This is analogous to the relation of the feelings to the other rational ideas, and needs only to be mentioned.

II. There are two subdivisions of this class of feelings.

First, the motives and emotions of self-respect, the sentiments of worthiness and unworthiness, of the noble and the ignoble, of honor and

shame, the feeling of conscious dignity. Such feelings appear in scorn of all that is base and mean, in sensitiveness to honor, in aspiration for all that is noble. Paul gloried in the reproach and cross of Christ, esteeming it honorable to suffer for the truth.

A second subdivision consists of prudential motives and emotions. Man is so constituted that he desires happiness rather than misery, well-being rather than its contrary, these being the only objects compared. When in the light of reason he sees what his welfare truly consists in, his conviction that it is the true good will lead him to wish for it, even though, taking all that interests and attracts him into the account, he does not choose it. This prudence is a motive to which appeal may always be made even in the most sinful man, inducing him to seek his true good.

This class of feelings is often called self-love; self-respect, the feeling belonging to the first subdivision, is the man's interest in his own dignity and honor and pertains to *worth*, the rational element of the good. Prudence, which constitutes the second subdivision, is the interest which a man takes in his own happiness in the whole of his being. It pertains to the empirical element of the good. The two are manifestations of self-love.

§ 53. Practical Importance in the Conduct of Life.

A correct knowledge of the good is essential to the right education and progress both of the individual and of society. Man may forego the gratification of a present desire because it is at the moment overpowered by a stronger. But if this is all, he is living the life of impulse, which is the life of a brute. In early infancy little higher than this appears; and the same reign of impulse is a prominent characteristic of savages. Manhood reveals itself and begins its true development only when man begins to control his desires by reason; only when from the darkness and mystery of his being the man emerges in the majesty of reason upon the dark and stormy waves of passion, like Jesus walking on the sea, and commands obedience. Progress both of the individual and of society begins in learning with intelligent forethought to forego the gratification of present impulse for future welfare. But if the forethought has regard only to degree of enjoyment, no real improvement is insured; for the sources of enjoyment are determined by the subjective state of the man. If the sources of his enjoyment are earthly, sensual, devilish, his quest of greater pleasure will only strengthen his existing preferences; his discoveries and inventions will only give new skill and power in seeking the same sordid ends, will develop skill and power, but not well-being; and the civilization result-

ing, where "wealth accumulates and men decay," will intensify and multiply evil and not good. The progress of the individual or of society towards real well-being is possible only as men discriminate among objects of pursuit and sources of enjoyment, according to their true worth, and so learn to value and seek better things.

CHAPTER XII.

THE ABSOLUTE: THE FIFTH ULTIMATE REALITY KNOWN THROUGH RATIONAL INTUITION.

§ 54. The Absolute.

THE fifth ultimate reality known through Rational Intuition is the Absolute; and this is accordingly the fifth ultimate idea of the reason.

I. The Absolute is that which exists independent of anything prerequisite to its existence; or, it is that which exists out of all *necessary* relations. The Absolute is the Unconditioned.

II. The belief that Absolute Being must exist is a rational intuition necessarily arising in the effort to complete the processes of thought in any line of investigation. For example, in knowing what is caused we necessarily believe that uncaused being must exist. If we admit the reality of force or energy in the course of nature and believe that every beginning or change of existence has a cause, then we necessarily know that there is a power which is not an effect, which persists in all changes, and is the unconditioned ground of the entire series. Otherwise power or force disappears, the course of nature ravel out, and all that is left is empty antecedence and sequence without real power or energy. So Spencer says: "The axiomatic truths of physical science unavoidably postulate Absolute Being as their common basis. The persistence of the universe is the persistence of that Unknown Cause, Power or Force which is manifested to us through all phenomena. Such is the foundation of any possible system of positive knowledge. Deeper than demonstration—deeper even than definite cognition—deep as the very nature of the mind, is the postulate at which we have arrived. Its authority transcends all other whatever; for not only is it given in the constitution of our own consciousness, but it is impossible to imagine a consciousness so constituted as not to give it Thus the belief which this datum constitutes has a higher warrant than any other whatever."* Thus we are not shut up to determine between the Absolute Being and an infinite series of finite causes, but between the Absolute Being and any cause or power whatever. A series of causes is

* First Principles, §§ 74, 76, 77, pp. 256, 258, 98.

unthinkable, except as ultimately resting on an Absolute Cause or Power.

The same is true in the sphere of rationality. The possibility of concluding reasoning in an inference which gives knowledge, rests on universal truths regulative of all thinking. The validity of these universal truths involves the existence of Reason unconditioned, universal and supreme, the same everywhere and always. Mathematics is a pure creation of the human mind resting on self-evident principles of reason. If our mathematics is not true in all the stars and planets, our astronomy is worthless. The same is true of all the universal principles which are laws of thought. If they are not true everywhere and always our science and all our reasoning give no knowledge; the human mind is constituted untrustworthy. Reason, then, must be universal and absolute, unconditioned by any change of finite things, the same everywhere and always. The alternative is not between the Absolute Reason and the human, but between the Absolute Reason and no Reason or rational knowledge.

Also, in extension in space, duration in time, or limitation in quantity, we find our thought carrying us to the infinite. Finite extension, duration and quantity must be thought as embosomed in the immensity, eternity and plenitude of the infinite.

In our endeavors to know the manifold in the unity of an all-comprehending system, we find it only as the universe is the manifestation of the Absolute and Unconditioned One.

Thus in every line of thought the knowledge rises self-evident before us that there must be an Absolute and Unconditioned Being. We properly recognize it as a primitive and universal truth, known in rational intuition. The idea of Absolute Being and the belief of its existence are in the background of human consciousness and at the foundation of all knowledge through human thought. "A consciousness which has got rid of the thought of absolute being would become a prey to endless atomicism and dissolution."* The existence of Absolute Being underlies the possibility of all finite being, power, reasoning and rational knowledge.

In this rational intuition a new sphere of reality is opened to human intelligence.

III. We cannot know *a priori* what the Absolute Being is; but, so far as this knowledge is possible, only *a posteriori*, in knowing that it accounts for the universe, including both man and nature. In the rational intuition that Absolute Being exists, it is known as the ground of the universe. The knowledge of being has been attained, as already

explained. This intuition gives us knowledge that a being exists that is absolute and unconditioned; and by thought we know further that, as the ultimate ground of the universe, the absolute must have all the powers necessary to account for its existence; as manifested or revealed in the universe, the Absolute must be endowed with the powers which can account for the existence and ongoing of the universe and which thus are revealed in it. Hence the Absolute is the All-conditioning as well as the Unconditioned. By rational intuition man knows that absolute being exists; his knowledge of what it is, is progressive with his progressive knowledge of man and nature in the universe.

Kant objects that, though the idea of God is necessary to the Reason, it has no content in consciousness. The foregoing remarks show that we do have knowledge what God is as he reveals himself in the universe. I may add that the idea has content in consciousness through the five ultimate ideas of the Reason. Kant admits that it has content in consciousness through the practical reason, in the knowledge of right and wrong. God speaks in our hearts in his moral law. But we now see that God, the Absolute Reason, equally reveals himself in our consciousness in the rational ideas of the True, the Perfect and the Good or Worthy. Also, God reveals himself in our consciousness in our religious experience; especially in the experience of a Christian man, the purest, loftiest and most comprehensive experience of God's gracious revelation of himself. Even in the religiousness of ruder men who know not Christ, God has "not left himself without witness." God acts on men and they react upon his influences; and thus they find him in their own consciousness. They know him and the spiritual sphere by this action and reaction, in a manner analogous to that in which they know the world of sense. No Christian man will say that the idea of God is an empty idea void of content in his own consciousness. He will say, "I know him whom I have believed;" not the idea of him or propositions about him, but HIM.

Herbert Spencer, recognizing the belief of the existence of Absolute Power as a primitive datum of consciousness and *a priori* to the individual, would account for the belief as the result of the experience of the human race, registered through innumerable generations in the human organism and transmitted by heredity. If so, men must have experienced the action of God on them through all generations, until religious belief and worship have become constitutional and the idea of an Absolute Being and the belief of his existence have become primitive data of consciousness.

§ 55. The Pseudo-Absolute.

I. The true absolute must be distinguished from false ideas of it assumed in the current objections to theism. These appear in various forms.

Some forms of the pseudo-absolute originate in the attempt to know what the absolute is *a priori*; that is, by simply developing the words, absolute, unconditioned, infinite. Then the idea of the absolute necessarily remains void of content and negative; it is not conditioned by dependence on any cause; it is not limited in time, space or quantity; and there is no reality of which we predicate the unconditionateness and the illimitation.

Other forms of the pseudo-absolute arise from attempting to determine empirically what the absolute is. The necessary result is that some conception of the finite is mistaken for the absolute. Of these I may mention two which have played important parts in the objections to theism.

One is the idea of the absolute as "the ALL," the mathematical sum total of all that is, the "omnitudo realitatis." It is supposed that the absolute is to be found by adding together all finite things, until we reach "the All." But "the All" thus found must always be itself finite.

The other is the idea that the absolute is the largest general notion or logical concept. The greater the extent of a general notion the less its content. A general notion including all reality in its extent would have no content. It would have no peculiar quality by which it could be distinguished from anything else; it would be entirely indeterminate. If we say that this is the general notion of being, then we merely hypostasize the copula; to affirm that anything is a being is then the weakest and least significant of affirmations; anything is a being which can be connected by the copula *is* with any predicate. Being then is entirely indeterminate; it is equal to nothing. And precisely this is what some eminent philosophers mean by the Absolute. So Hamilton says that the idea of the absolute is attained "only by thinking away every character by which the finite was conceived." We must, then, think away all that we know of concrete being and its properties and powers; and what is left is the Absolute. This is very like the famous metaphysical process of ascertaining what a swallow's nest in a clay-bank is, by thinking away the bank and leaving the hole. The Absolute would be a logical general notion and the world-process would be a process of logic.

II. Many of the current objections against theism are founded on a false idea of the absolute and from it derive all their force.

1. It is said that the absolute is "pure being;" it is "the thing in itself;" it is "out of all relations." These are results of attempting to

ascertain *a priori* what the absolute is. The Absolute, the unconditioned, the infinite are adjectives and negatives. It is impossible by developing them *a priori* to pass from the adjective to the substantive, from the negative to the positive. We get only pure being which is equal to nothing. But it has already been shown that being is known, not merely as an abstract general notion, but as concrete reality; that in the rational intuition of the Absolute we already know what a being is; the knowledge of being is not given in the rational intuition, but only the necessary truth that a being must exist absolute or unconditioned. But in knowing being as absolute or unconditioned we do not cease to know it as being, endowed with all the essential powers of being, and with all the powers essential to it as the ground and cause of the universe. And so in opposition to Hamilton, J. S. Mill says: "Anything carried to the infinite must have all the properties of the same thing as finite, except those which depend on its finiteness."* It enters then into the true idea of the absolute, not that it must exist out of all relations, but only out of all *necessary* relations. It may be in relation to a universe; it is known to us as the ground and cause of the universe, but it is not dependent on it. The existence of the universe is conditioned on the existence of God; but the existence of God is not conditioned on the existence of the universe.

2. There is, also, a class of objections founded on a false idea of the absolute as the sum total of the universe.

It is objected that if the existence of reason in the universe proves that God is spirit, the existence of matter in the universe equally proves that God is matter. This objection derives its force from the error that the absolute is the sum total of the finite. But the relation of the absolute to the finite is not the mathematical relation of a total to its parts, but it is a dynamical and rational relation. The true Absolute is a power competent to account for the existence of matter dynamically and rationally. The conclusion of the objector is not an inference from the true idea of the Absolute; on the contrary, it is incompatible with it and contradictory to it.

The objection that evil must exist in the Absolute is founded on the same erroneous idea. Says Hegel: "What kind of an Absolute Being is that which does not contain in itself all that is actual, even evil included?" This implies that the absolute is the sum total of all things, and therefore must include evil. This conclusion, also, is not only not an inference from the true idea of the absolute, but it is contradictory to it. If God for wise reasons gives existence to finite rational beings in a moral system, they in their free agency may do wrong. Their

* Examination of Hamilton, Vol. I., 129.

free action accounts for the fact of sin; to account for it, it is not necessary to infer that God is sinful, but only that for wise reasons he has brought into being a rational and moral system consisting of rational beings free to do right or to do wrong.

Mansel objects that "the distinction between the possible and the actual can have no existence as regards the absolutely infinite; for an unrealized possibility is necessarily a relation and a limit."* This rests on a pseudo-absolute as existing out of all relations, and also on a pseudo-absolute empirically developed as the sum of all that is already actually existent. These objections do not show us reason breaking down in contradiction; but only false philosophy befooling itself in declaring that the finite is itself the infinite, and the conditioned itself the unconditioned.

3. The agnostics object that the Absolute cannot be a personal being because to predicate of it personality, is to limit it; if the absolute is personal, it must exclude the impersonal. The objection is of equal force against predicating of the absolute any attribute whatever; we therefore cannot say that it exists, for being exists only in its qualities and powers; we cannot even say that it is absolute or unconditioned, for that would distinguish it from the finite and conditioned, and so would limit it. This objection is valid only of some form of the pseudo-absolute. If the Absolute is "pure being," or "the All," as a sum total of finites, or the largest general notion, then to predicate of it personality would be incompatible with the idea of the absolute and would involve **limitation**. But it is not incompatible with the true idea of the **absolute**, and if predicated of it involves no limitation.

This objection is founded on the maxim, "Omnis determinatio negatio est," or, "All definition limits." I have already shown that, while this maxim is true of mathematical quantities and logical general notions, it is not true of concrete beings; that of these the contrary is true; the more determinate or specific a being is by the increase or multiplication of its powers, the greater, and not the less or more limited, is the being.

§ 56. Personality of the Absolute.

I. The Absolute may be a person. Reason and free-will are essential elements of personality. Will is Reason energizing; Reason is Power rational. Reason is in its essence universal and unchanging, the same in all places and all time, unconditioned and all-conditioning. Reason energizing is autonomic, self-directive, self-exertive, free. Reason realizing its ideals in action is the all-perfect. It is ade-

* *Limits of Religious Thought*, p. 76.

quate to account for the existence of the universe and of all that is in it.

II. The Absolute Being must be a person. Energizing Reason and it alone, adequately accounts for all that is. The vindication of this proposition requires the presentation of the reasons why we believe that the personal God exists, and does not come within the design of this book. It is therefore relegated to Natural Theology.

CHAPTER XIII.

THE THREE GRADES OF SCIENTIFIC KNOWLEDGE.

§ 57. Definition of Science.

SCIENTIFIC knowledge is distinguished from unscientific. Every one recognizes the distinction; but the attempts to define it have not been satisfactory. This is due in part to the fact that the word science is variously defined and used with a variety of meanings. It is idle to debate whether a particular branch of knowledge is science or not, so long as the disputants are not agreed as to the meaning of the word. It is due also to a certain relativity essential in the idea of science.

Scientific knowledge is not distinguished from unscientific knowledge by being true or real knowledge. The unscientific knowledge that stones fall when unsupported and that grass grows is as true and real knowledge as is the scientific knowledge of the same facts.

Knowledge is distinguished as scientific by the aim and method of the intellectual process by which it is attained. Its aim in respect to any reality investigated is to attain knowledge definite, well substantiated, exactly enunciated, complete, and systemized; its method is to regard all the true laws of thought, to investigate all sources of knowledge, and to use all the instruments and means which ingenuity has contrived to give greater exactness and wider scope to knowledge. The knowledge acquired by such a process is called scientific knowledge. The collected results of such investigations respecting any particular class of realities, enunciated in propositions, proved, and systemized constitute a particular science, as the science of Astronomy or Chemistry.

Hence a science will realize in a greater or less degree the ends aimed at by scientific thought. It will present knowledge having as close an approximation to definiteness as man with his present information and means of investigation can attain; substantiated by convincing evidence; enunciated in exact terms—in some sciences, as in chemistry and botany, in a nomenclature peculiar to itself; complete, as far as men can yet make it; and presenting the object treated in its relation to other things and to the universal system.

It is not essential to science that it be at any given time complete or free from error. It is called science in reference to the aims and methods of the intellectual process of which it is the result, not in reference to its own absolute correctness and completeness. The Chaldeans and Egyptians had a science of astronomy as really as we. The Ptolemaic System of astronomy was science as really as is the Copernican. Otherwise no science exists so long as it is possible to attain any new knowledge on the subject or to correct any errors.

It is not essential to constitute knowledge scientific, that it be the knowledge of a law of nature. Comte held that knowledge is science only when it enables us to foresee and foretell events; that is, that science is distinctively and essentially the knowledge of the laws of nature. But if so history, geography, philology, anatomy, descriptive geology, and all descriptive sciences, so-called, are not sciences. This is admitted and they are therefore excluded from the hierarchy of sciences by Comte, the most consistent of thinkers in boldly accepting the legitimate consequences of his own principles. Also all knowledge of particular facts would be excluded from science, as the knowledge of the diameter of the earth or of Mars, the time of their rotation on their axis and of their revolution around the sun; also all colligation of facts, as that by which we know that Cuba is an island and that the orbit of Mars is a particular geometrical figure.

§58. The Three Grades of Science Defined.

There are three grades of scientific knowledge, by which the mind must ascend in attaining knowledge of all that may be known respecting any object whatever. They may be named respectively, Empirical, Rationalistic or Noetic, and Theological Science; or Empiricism, Rationalism, and Theology.

I. The first grade of scientific knowledge is Empirical Science. This is the knowledge of particular realities either by observation or by inference, of their unity in coexisting relations, of their co-ordination in the invariable sequences of causal connection, and thus of their unity in a system.

The first step in empirical science is gaining knowledge of individual realities; as an astronomer observes a transit of Venus, a chemist learns by experiment the properties of a quantity of oxygen, an entomologist observes an insect. The second step is learning how the object is in unity with other things in coexistent relations. Of this, classification by resemblance is an example. The third step is co-ordination in uniform sequences. Here we obtain those general facts which are called laws of nature, such as the law of gravitation, or of the conservation and correlation of force. Lastly, empirical science, by the

knowledge of the unity of particular realities in their static or co-existing relations, and of their co-ordination in uniform sequences in their dynamic relations, attains to the knowledge of their unity in a system; for example, the unity of the sun and planets in the solar system.

Empirical Science answers the question, what is the fact?

There are two divisions of empirical science: Physical Science, or the science of nature, founded on sense-perception; and Psychology, or the science of mind, founded on self-consciousness and the observation and history of men.

II. The second grade of scientific knowledge is Noetic or Rationalistic Science. This is founded on the four norms or standards of reason. It is the scientific knowledge of the truths, laws, ideals, and ends of Reason; of all the truths necessarily involved in them or inferable from them; and of all empirically known reality in its relation thereto. Empirical science starts with the particular realities presented in sense-perception or self-consciousness; even the realities not immediately perceived but only inferred, are realities which are in their nature perceptible, as the attracting of iron by a magnet which I have not actually seen. Rationalistic science starts with the universal principles known in rational intuition; but it has already been shown that the first principles of reason in themselves have no content and give no knowledge; and they are known in consciousness only by some occasion in experience. Hence this second branch of science must find its content in the realities empirically known; it is the scientific knowledge of empirically known reality in its relation to the truths, laws, ideals, and ends of Reason. Empirical science is the knowledge of particular facts; rationalistic science is the knowledge of the universal and necessary in its relation to the particular and contingent, and of the particular and contingent in its relation to the universal and the necessary. Empirical science recognizes reality as it is known in sense-perception and self-consciousness; rationalistic science recognizes it as it is known by the intuitive Reason. The fact that man is constituted capable both of perceptive intuition and rational, is the basis of the distinction of empirical science and noetic. The distinction necessarily results from the constitution of man.

There is no name which, as actually used, denotes precisely this second grade of science. It is often called Metaphysics. But this word is used to denote the science of mind, as the opposite of Physics or the science of nature. The science of mind is empirical as well as noetic; while the science of nature is noetic or rationalistic as well as empirical. On the other hand metaphysics, as used, never includes mathematics, which is indisputably a noetic science as I have here de-

fined it. The word *Metaphysics*, as used, includes a part of empirical science and excludes a part of noetic science; and if employed as the name of the latter would inevitably mislead. In the lack of an adequate name in actual use, I have chosen the words, *rationalistic* or *noetic*, as indicating the distinctive relation of this branch of science to the principles and ideas of reason.

There are three divisions of noetic science, *Mathematics*, *Logic* and *Philosophy*.

1. *Mathematics* is the science deduced from certain definitions and axioms of reason pertaining exclusively to the forms of space and number. Pure mathematics has scarcely any content of empirically known reality other than the geometrical figures and arithmetical and algebraical symbols necessary to aid the mind in thinking. Space and number themselves are but forms of things. Mathematics is applied to measure whatever has measurable quantity.

J. S. Mill has made the desperate attempt to explain mathematics as an empirical science.* In his *Autobiography* he says that "the chief strength of this false philosophy" (which recognizes the validity of first principles or rational intuitions) "in morals, politics, and religion lies in the appeal which it is accustomed to make to the evidence of mathematics and the cognate branches of physical science. To expel it from these is to drive it from its stronghold," (pp. 225, 226.) And to accomplish this, he tells us, he wrote the discussion of mathematical evidence in his *Logic*. Mr. Mill here admits that mathematics properly ranks with metaphysics, and is one division of this second grade of scientific knowledge. Prof. W. K. Clifford, in his *Lectures and Essays*, goes farther than Mr. Mill, and denies both the exactness and the certainty of the axioms of mathematics and its demonstrated conclusions. The *animus* of both writers seems to be to get rid of the argument from mathematics in support of the validity of rational intuitions and of metaphysical science. No arguments, however, are likely to convince men that they have learned the principles and demonstrated the conclusions of mathematics by observation and experiment. Till they are thus convinced they must acknowledge the validity of knowledge through the intuitions of reason and of the noetic or rationalistic sciences founded upon them.

2. *Logic* is the science of the laws of thought, deduced from certain axioms of Reason pertaining to reflective thought. This science pertains to the forms and laws of thought rather than to its matter or content.

3. The third division of rationalistic science is *Philosophy*. This is

* *Logic*. Book II., Chaps. v. and vi.

the interpretation and vindication of empirically known reality to the Reason. What any reality is and in what relations it exists and acts being empirically known, philosophy ascertains whether in existing and acting thus it expresses any truth or thought of reason, conforms to any rational law, realizes any rational ideal, or accomplishes any good approved by reason as worthy. It inquires whether and how it can be a component part of a rational system. Philosophy gives the *rationale* of things; it shows their *reasonableness* by showing their accordance with the truth, laws, ideals and ends of reason. Man is greater than the material universe, for he brings it and all that it contains before his own Reason for criticism and judgment by the rational standards of Truth, Right, Perfection and Good. If he finds any alleged discovery or fact to be contradictory to these standards, or to facts already known, he cannot accept it as true but remands it for further investigation.

Philosophy is the pre-eminent noetic science. Comte assumes that Metaphysics consists in attempting to find the essence of things and in referring phenomena to some abstract entity, as *substance, cause, nature*. So he easily ridiculed it as adding nothing to knowledge, as Pope had done before him in making the great philosopher Martinus Scriblerus affirm that the essence of a smoke-jack is its meat-roasting quality, and as Mr. Huxley does in suggesting *aquosity* as explaining the properties of water. A celebrated argument is cited that the mind must be always thinking even in sleep, because it is its *essence* to think. Mr. Mill, in his Essay on Comte, mentions the use of the word in such phrases as *Essence of Peppermint* as a curious survival in popular language of the old philosophical idea.

So far as the history of thought justifies these assertions, this was not true philosophy, but an abuse and misapprehension of it. Kant himself has given occasion for this misrepresentation by teaching that reality is the thing in itself which beneath all phenomena transcends and eludes finite intelligence. But true philosophy rejects at the threshold this transcendental skepticism which denies the reality of knowledge whenever it is relative to the powers of an intelligent being, and thus lays down as the first law of thought that knowledge is impossible when there is a mind that knows. Philosophy wastes no effort in trying to penetrate the sphere which may lie beyond the sphere of human intelligence; but it recognizes the fact that man is intelligent and rational; and its proper work is to bring all empirically known reality into the light of reason, to criticise and judge it by rational standards or norms, and thus to interpret and vindicate it to the reason as reasonable.

It has been said that empirical science is the knowledge of phenom-

ena, while philosophy treats of causes. Since the causal judgment is a first principle of reason, philosophy inquires into the cause of things and seeks to know the Cosmos in a unity of causal dependence. But the causal judgment is not the only principle of reason; and we have not only truths of reason, but also the ideas of the right, the perfect, and the good. Philosophy, therefore, cannot be limited to an inquiry for causes, but is the knowledge of empirically known reality in its relations to the truths, laws, ideals and ends of reason.

Writers who deny rational intuition sometimes recognize a distinction between philosophy and empirical science. Lewes, in the first edition of the *Biographical History of Philosophy*, defines philosophy: "It is the systemization of the conceptions furnished by science. As science is the systemization of the various generalities reached through particulars, so philosophy is the systemization of the generalities of generalities." But he limits it within his definition of knowledge as "the indisputable conclusions of experience." John Fiske, in his "*Outlines of Cosmic Philosophy*," distinguishes philosophy from empirical science, which he calls "science" without any adjective: it embraces a wider range of thought; the relations which it formulates are more general, abstract and remote; it presents a larger and more complex organization of general truths into a coherent system. What they here recognize as philosophy is simply empirical science in its wider range. Hence by it they never lift themselves above the physical. Like the ancient giants who piled up mountains in order to reach the heavens, they stand, after all, on masses of matter; they never attain the spiritual either in man or God. But men can plant their feet on the heights of the spiritual and the divine only as in the inception of knowledge they find the spiritual and rational within themselves and thus come to the philosophy which recognizes the universe as a rational system in which reason is omnipresent and supreme, and thence to theology in which the spirit of man comes into the presence of God.

We have seen that empirical science by inference extends far beyond observed facts; and that the validity of its inferences depends on the principles of reason. It is also true that the students of physical science are now engaged in discussing questions which are essentially metaphysical. Therefore it is not easy to draw the exact line of demarcation between empirical and philosophical science. They differ, however, both in their method and their matter. They differ in method: philosophy is not occupied with acquiring the knowledge of particular realities by observation and inference, but in comparing these already known realities and their factual relations with the norms of reason. They differ in their matter: for when empirical science

has attained the largest unity of things in their merely factual static and dynamic relations, philosophy brings it all into the light of reason and reveals it as the expression of the archetypal thoughts of reason, as pervaded by moral government and law, as progressively realizing rational ideals, as accomplishing ends which reason approves as good, and thus as existing in the unity of a rational system. In empirical science man is the observer, in philosophical science he is the interpreter of nature.

Every empirical science is subject to this scrutiny and judgment of reason, and therefore we properly speak of the philosophy of any science. The results of all the empirical sciences are compared under the scrutiny and judgment of the reason, and discovered to exist in the harmony of a rational system; hence Krug properly calls philosophy *Urwissenschaft*, the fundamental science, or the science of sciences.

Since philosophy has relation to the four first norms or fundamental ideas of reason, it must have four subdivisions:

Speculative Philosophy, founded on the norm or idea of the True;

Ethical Philosophy, founded on the norm or idea of the Right or of Law;

Æsthetic Philosophy, founded on the idea or norm of the Perfect;

Teleological Philosophy, founded on the norm or idea of the Good. This last subdivision is commonly treated under Ethics. It would greatly subserve clearness of ethical thought if it were better understood that this is a distinct subject from the Right. This has been so little recognized as a distinct branch of philosophy that it has received no distinct name. As it treats the question, "What ends are approved by reason as worthy and as such as good?" I have suggested for it the name, Teleological philosophy. It leads to the question of final causes; it discusses sociology, statesmanship, civil polity, political economy and whatever pertains to the progress of society and the promotion of its welfare.

III. The third grade of scientific knowledge is Theology. This is the knowledge of God and of all realities of empirical and rationalistic science in their relations to him and thus in their deepest relations and unity with each other as a universe. As rationalistic science is founded on the four first noumena, the True, the Right, the Perfect, and the Good, theology is founded on the fifth ultimate reality known through rational intuition, the Absolute. This is the highest stage and culmination of knowledge. In this we know all things in their unity as the universe of God and thus know the true significance of the universe as grounded in Reason, expressing archetypal truth, accordant with rational law, progressive towards ideal perfection, and realizing the true good.

IV. The mind must ascend by each of the three grades in order to know all that may be known of any object whatever. The objects of

human knowledge are properly classed in three great classes, Nature, Man and God. But we are not here classifying the objects of knowledge but are distinguishing the necessary grades or stages of knowledge respecting any object. In investigating any object in nature the student must first learn empirically what it is and what are its factual static and dynamic relations; he must know it next noetically in its rational or noetic relations to the truths, laws, ideals and ends of reason; lastly, he must know it theologically as a component part of the rational and universal system which expresses the archetypal thoughts of the Supreme Reason, that is, of God. The mind must ascend through the same grades in attaining complete and true knowledge of man. Empirical knowledge of God is of course impossible; but a scientific knowledge of God can be attained only by passing through the empirical and rationalistic knowledge of the universe to the knowledge of God in which alone the consummation and unity of all knowledge are attained. Thus from a pebble up to God the mind can attain all that it is possible for it to know of any object only by the three grades of knowledge, the empirical, the noetic, and the theological.

V. Knowledge in each of the three grades is science, in the true sense of the word, and the exclusive appropriation of the word to empirical science is unjustifiable. I have already explained what I regard as the true meaning of the word science. If this is the true meaning, then it is indisputable that knowledge in each of the three grades is science. The question is often asked whether theology is a science. Certainly theology is not empirical science; still less is it merely the empirical science of nature. But in the true meaning of the word theology is science.

Students of the physical sciences have accustomed themselves of late to limit the word science exclusively to empirical science, and even, in many cases, to the empirical grade of physical science. Thus Prof. Simon Newcomb, in his address before the American Scientific Association in 1878, said: "Science concerns itself only with phenomena and the relations which connect them, and does not take account of any question which does not in some way admit of being brought to the test of observation." This, he says, is "fundamental in the history of modern science." Even so considerate and philosophical a writer as Janet says: "Doubtless philosophical thought mingles always more or less with science, especially in the sphere of organized being; but science rightly strives to disengage itself more and more from it, and to reduce the problem to relations capable of being determined by experience."* This is a legitimate characteristic and aim of empirical

* *Final Causes: Translation*, p. 117.

science, but it has no right to appropriate to itself exclusively the name science and to distinguish itself as science from philosophy and theology. This abuse of the word is, however, becoming common. The three grades are habitually designated as science, philosophy, and theology, implying that the two latter are not science. There is a mighty power in words. And it is an unworthy artifice for the students of physical science to appropriate to their own branch of study the name science and to themselves the name scientists. They can justify this only by reverting to the complete Positivism of Comte, and avowing and maintaining that knowledge is limited to the observations made by the senses. But if they do this, they must renounce the important part of their own sciences known by inferences depending for their validity on rational intuitions, and must abandon as utterly unscientific the questions which now most occupy public attention in the annual meetings both of the British and the American Scientific Associations. They must also exclude from science mathematics and logic as well as philosophy and theology. And in fact Prof. Newcomb's definition does equally exclude them all.

§ 59. Proof of the Doctrine.

I. The three grades of scientific knowledge are necessary from the constitution of the human mind.

1. Since knowledge begins in presentative intuition and as such is the knowledge of particular realities, scientific knowledge must begin as empirical science. Man cannot think till he has realities known as facts to think about. The first step in science must be to attain precise knowledge of particular facts and their factual relations. This is empirical science. In it the investigator aims merely to clear around himself an area in which he can see every object distinctly and attain a definite knowledge of it. While he depends on noetic principles for the validity of the inferences by which he extends his knowledge to facts beyond his immediate observation, yet the knowledge obtained from whatever source is simply the knowledge of particular realities and the factual relations in which they coexist or are co-ordinated in invariable sequences. Empirical science no more takes cognizance of God than a mechanic investigating a watch takes cognizance of the man who made it. It asks no questions whether or not the observed realities express rational truths, conform to rational law, realize rational ideas, or accomplish rational ends. The aim of the investigator is to clear the area from all obscurity, to divest it of all coloring of his own preconceived ideas, and clearly to apprehend all the realities factually in it and open to clear and definite knowledge, and nothing else. This is the real and legitimate sphere of empirical

science; and it is perfectly legitimate for its students to affirm that it takes no cognizance of any question of theology or philosophy. Their error and offence lie in their claim that empirical science is the only science, and in thus denying that the realities recognized in philosophy and theology are objects of human knowledge.

2. Knowledge originates as at once sense-perception and self-consciousness; thus in its very inception it is knowledge of the phenomena of nature and mind, and necessitates the investigation and certifies the possibility of knowledge in both spheres. Accordingly empirical science is the science both of nature and of mind. On the one hand is the perception of outward objects, on the other the consciousness of self; on the one hand the sphere of matter and force, on the other the sphere of conscious rationality and of voluntary and free power. The distinction between these never has been and never can be obliterated; the facts remain forever the data of two distinct spheres of thought. The distinction inheres in the very essence of human knowledge and comes to light in its very inception. Once having entered these two spheres of thought the mind must compare them and find their unity and harmony. This comparison of the physical and the mental leads necessarily to philosophy and ultimately to theology. This can be prevented only by denying with Comte that self-consciousness is a source of knowledge. For self-consciousness is a door opening into rationalistic science, and so long as it stands open human thought will push in to philosophy and to theology.

3. The fact that the mind is constituted with the power of rational intuition makes these three grades of scientific knowledge inevitable. This fact has already been fully established. Whoever admits it must admit the reality of rationalistic and theological, as well as of empirical science. The knowledge of the fundamental realities, the True, the Right, the Perfect and the Good, is the basis of rationalistic science. The knowledge of the fundamental reality, the Absolute, is the basis of theological science.

II. A second proof of the reality of these three grades of scientific knowledge is the common recognition of them in the history of human thought.

They are recognized in common life. Every one, learned or unlearned, talks metaphysics, usually, as M. Jourdain talked prose all his life, without knowing it. Whewell says: "We often hear persons declare that they have no esteem for metaphysics and intend to shun all metaphysical reasoning; and this is usually the prelude to some very bad metaphysical reasoning."*

* History of Moral Philosophy.

Empiricists, who set out to exclude all knowledge except of phenomena, find themselves obliged to use the principles of reason, and continually slide into the discussion of both philosophical and theological questions. When they speak of body, or matter, or force, they are as metaphysical as the philosopher when he speaks of mind. Nature is traversed by Reason, and therefore physics must use metaphysics.

The conflicts of these types of thought and the discussions of their respective claims through all ages, show the persistent power which each has over the human mind.

Any attempt to dispossess one of them of its place produces a sort of convulsion in the world of thought and issues in agnosticism. Great systems of Materialism or Sensationalism, on the one hand, and of Idealism, on the other, have arisen; but the avenger of the excluded knowledge always comes in the shape of agnosticism or universal skepticism, and destroys knowledge altogether. Over and over it has been demonstrated that the attempt to hold one of these grades as the whole of knowledge involves universal skepticism. Even the most pronounced advocates of the theory that all knowledge is from the senses, find the need of philosophy to supplement empiricism. Says Haeckel: "The strong edifice of true monistic science, or, what is the same thing, the science of nature, exists only by the closest interaction and the reciprocal penetration of philosophy and empirical knowledge. The lamentable estrangement between science and philosophy, and the rude empiricism which is nowadays unfortunately praised by most naturalists as Natural Science, have given rise to those strange freaks of the understanding, to those gross insults against elementary logic, and to that incapacity of forming the simplest conclusions, which one may meet with any day in all branches of science."* Although Prof. Haeckel's theory of knowledge prevents him and others who hold the same from attaining an adequate conception of what philosophy is, yet in their recognition of it we have their testimony to the impossibility of completing scientific knowledge in mere empiricism and the necessity of a noetic science that transcends it.

The threefold distinction has been recognized by profound thinkers in all ages. Lord Bacon, for example, recognizes three grades of knowledge. Of these he says that to the devout "they are as the three acclamations, *Holy, Holy, Holy*: holy in the description or dilatation of his works, holy in the concatenation of them, and holy in the union of them in a perpetual and uniform law." His threefold division of knowledge is not in form the same with that which has been here presented; but in his discussion of it in various places he explicitly recognizes as real

* History of Creation, Translation, Vol. II., pp. 349, 350.

knowledge and legitimate spheres of investigation each of the three grades of knowledge here set forth. Lord Bacon is constantly cited as denying that final causes are within the scope of human knowledge. But his famous remark that final causes are like vestal virgins, consecrated to religion and therefore barren, was made by him with exclusive reference to physical science. It is continually quoted out of its connection, so as to misrepresent his meaning. Whoever will examine his discussions of the scope and departments of human knowledge will see that, while he denies that the study of final causes belongs in physical science and affirms that the study of them as physical science has hindered scientific progress, he also recognizes metaphysics as an additional sphere of human knowledge and includes in it the knowledge of final causes as real knowledge and the study of them as a legitimate branch of inquiry.* To those who misrepresent him, we commend his own words: "Let no man upon a weak conceit of sobriety or an ill-applied moderation think or maintain that a man can search too far or be too well studied in the book of God's word or the book of God's works, divinity or philosophy, but rather let men endeavor an endless progress or proficiency in both; only let men beware that they apply both to charity and not to swelling, and, again, that they do not unwisely mingle or confound these learnings together."†

III. A third proof of the reality of the three grades of scientific knowledge is in the fact that they are reciprocally dependent and that each is necessary for the completion of the knowledge of any object.

§ 60. The Harmony of Empirical, Rationalistic and Theological Science.

Empirical, Rationalistic or Noetic, and Theological Science are reciprocally dependent and complementary, and therefore necessarily in harmony.

I. Science in each lower grade assumes and depends on the principles of the higher.

1. Empirical science assumes and depends on the intuitions of reason which are the first principles of rational science. It depends on them for the certainty of its knowledge by observation and experiments, the conclusiveness of its inductions, deductions and verifications, and for the laws which regulate all thought. It cannot verify its own first principles; it accepts them from a higher source of knowledge. Physical science depends on Mathematics, which itself is purely a rationalistic or noetic science. Physical science is ontological; it has passed away

* Advancement of Learning, B. II.; De Augmentis, B. III.

† Advancement of Learning, B. I.

from the Positivism of Comte, who recognized only phenomena and motion and denied all knowledge of matter and force, and concerns itself with matter and forces, with atoms, molecules, and ethers. It assumes that the problem of ontology is solved and that ontological knowledge, the knowledge of being and force as distinguished from the knowledge of phenomena and motion, is actually attained. Thus at every step it rests on the principles of rationalistic or noetic science. If rational intuitions are not valid the whole fabric of empirical science dissolves.

2. Noetic Science in recognizing the first principles of reason as universal and necessary assumes the existence and supremacy of the universal and absolute Reason, which is the first principle of theology. Noetic science has its own principles of reason and attains from them its own norms, the ultimate ideas of the true, the right, the perfect and the good, and develops them in mathematics, logic and philosophy. Yet it rests on the assumption that Reason is supreme, universal, unconditioned and absolute, and thus itself derives the deepest principles of human thought from beyond and above itself, from the sphere of theology.

3. Theology contains its fundamental principle within itself. The principle that reason is supreme, universal and absolute is the deepest foundation of human thought, its truth is implied in the reality of every kind of human knowledge, and knowledge, in whatever direction it is pushed, must ultimately rest on this foundation. If reason is not absolute and supreme, no knowledge, theological, noetic or empirical exists. Here is the ultimate goal and rest of the human intelligence. Every attempt to project thought behind the absolute Being issues in mere negations, which are symbols of the cessation of thought.

II. Science in each higher grade rests on the lower for truths and facts which give it content.

1. Noetic or rationalistic science depends on the empirical for its content. If there were no empirically known facts and their factual coexistent and co-ordinated relations, there would be nothing to which to apply rational principles or about which to ask philosophical questions. Rational principles advance us in knowledge only as they are applied to ascertained facts. They are the wings of the soul; but unavailing for flight towards the source of light without the atmosphere of empirically known reality. Empirical science itself, as we have seen, passes beyond positivism or phenomenalism to ontological knowledge.

It must be added that by recognizing the dependence of philosophy on empirically ascertained facts, the philosophical student obtains a valuable and indispensable discipline in the spirit and methods of

empirical science, and learns carefulness and thoroughness in investigation, steadfastness in adhering to facts, sobriety in speculation and hypothesis, cautiousness in reasoning and in drawing conclusions. Philosophy, then, must use the facts ascertained by empirical science; because, otherwise, it is void of content and reality, and because discipline in the empirical spirit and method is important to the safety and sobriety of its reasonings. Without these in the study of philosophy, to use the language of Milton, more vigorous than elegant, we are "de-luded with ragged notions and brabblements and dragged to an asinine feast of sow-thistles and brambles."

This is set forth by Lord Bacon in the simile of the spider, ant and bee: "Those who have treated of the sciences have been either empirical or dogmatical. The former, like ants, only heap and use their store; the latter, like spiders, spin out of themselves their web. The bee, a mean between the two, extracts matter from the flowers of the garden and the field, but elaborates and fashions it by her own efforts. The true labor of philosophy resembles hers; for it neither relies entirely nor principally on powers of the mind, nor yet lays up in memory the matter afforded by the experiments of natural history and mechanics in their raw state, but changes and elaborates them in the understanding. We have good reason, therefore, to derive hope from a closer and purer alliance of these faculties (the experimental and the rational), than has yet been attempted."*

The error of the mediæval philosophy was the neglect of this dependence of philosophy on facts, and the attempt to educe knowledge too exclusively from *a priori* principles and logical forms of thought. The result was a jargon of universals and particulars, of essence and accidents, of entities and quiddities, of Petreities and Johannities which hindered philosophical science quite as much as empirical, and served no useful purpose but to illustrate the infinite divisibility of thought and to warn all succeeding scholars against the divorce of rational from empirical science. Equally fruitless must be any attempt to develop from *a priori* principles alone, any rational science, whether psychology, cosmology, ethics, politics, or theology. It tends to substitute abstract notions for concrete realities, words for things; it impairs the capacity to discriminate between the important and the unimportant, the actual and the verbal, and degenerates into the discussion of puerile questions and disputes about words.

The discussion of such questions became a common characteristic of decaying literature in the decline of the Roman Empire. It was also common in the Middle Ages and contributed to the "word-weariness"

which prepared men to welcome the Renaissance and the Reformation.

Mr. Mill, in his *Essay on Comte* says: "No one, unless entirely ignorant of the history of thought, will deny that the mistaking of abstractions for realities pervaded speculation all through antiquity and the Middle Ages."* Mr. Mill himself is the one whom this sweeping and unwarranted assertion convicts of "ignorance of the history of thought." His assertion is refuted by recent observations which have demonstrated the surprising accuracy of Aristotle as a scientific observer, and by the more careful investigation of the progress of empirical science among the Greeks and the Egyptians, and by the remarkable anticipations of modern discoveries made by their metaphysical philosophers. It is, however, an example of unwarranted assertions and hasty generalizations respecting the history of human thought which are too common with those who are trying to exclude noetic or metaphysical science and theology from the sphere of human knowledge. Even in the Middle Ages there were vigorous thinkers in empirical, rationalistic and theological science who rendered valuable service in promoting intellectual progress and culture. If "word-weariness" prepared for the Reformation, yet what had engendered the "word-weariness" and given the impulse to the investigation of reality? what but the necessity of the three grades of knowledge and the labors of vigorous thinkers in them during those dark ages? It must be remembered that the Renaissance and the Reformation were themselves the legitimate offspring of the intellectual and religious life which preceded them, the products of the spiritual forces of the Middle Ages themselves. It is very easy by hasty generalization to give a sweeping description of the life of an age by one characteristic. But it is as superficial as it is easy. In all ages of civilization the human mind will be found exhibiting the same constitution and thinking under the same laws of thought. Men are always liable to mistakes; peculiar circumstances may give peculiar prominence to one grade of scientific thought in one age and to another in another. But it will be found in every civilized age or individual that the three grades of scientific thought coexist, that they are not each exclusive of the others, but each complementary to the others. Scientific knowledge is a seamless garment; the threads are distinguishable but woven together; they can be separated only by a rent; they can be completely parted only by disintegrating the whole texture.

2. Theology depends on noetic and empirical science to give the occasion on which the idea of Absolute Being arises, and to give con-

* As originally published in *Westminster Review*, April, 1865.

tent to the idea. Without the facts and truths of empirical and rationalistic science the human mind would never attain the idea of the universe nor ask how it is to be accounted for. Without these, if the idea of the Absolute should arise, it would remain an unknowable something without content. Theology, then, must not be divorced from empirical and noetic science; it is in vain to attempt to develop it immediately from the *a priori* idea of absolute being. The attempt to do so has vitiated not a little of modern theological thought; notably the Pantheistic philosophies of Germany and the agnosticism of Hamilton. We learn what God is, not by an immediate development of the *a priori* idea of the absolute, but by ascertaining through empirical and philosophical science, what the universe is, to account for which the existence of God is necessary, and what the Absolute Being must be who is adequate to account for it.

A criticism of the late Dr. Draper says: "In discussing human history and religion, he began with the tangible and physical facts, while theology, which he disliked cordially, begins and proceeds very differently. But there is reason to believe that Dr. Draper's method, which he intended to be severely inductive, will eventually control the whole domain of ethics, theology and metaphysics." The critic utters a very common misrepresentation of theology. Theology begins, as all science must, with empirical knowledge of facts. But it is empirical knowledge of one's self as well as of the outward world, of thought, intelligence, will, virtue known in self-consciousness, as well as of "tangible and physical facts;" and from this the mind proceeds to mathematics, logic, philosophy and theology. The false method of procedure is that commended by the critic, in which knowledge begins as empirical, but is never able to pass beyond the empiricism, and remains shut up in it—and that an empiricism which willfully refuses to take notice of one half of the facts given in perceptive intuition.

3. Empirical science depends for its content on no grade of scientific knowledge below itself. It derives its content immediately from sense-perception and self-consciousness. From these it receives the raw material of knowledge and takes the first step in elaborating this raw material into science. While noetic and theological science have a certain independence as to their principles, but depend on empirical science for their content of facts, empirical science has a certain independence as to its content of facts but depends on rationalistic or noetic and theological science for its principles. While in the constitution of the mind empirical science has its root in the presentative intuition, noetic and theological science have their root in the rational intuition.

III. Science in its lower grades raises questions which only science in a higher grade can answer.

1. Empirical Science ascertains particular realities and their factual static and dynamic relations, but transmits its unanswered questions to rationalistic science. Its area of reality it clears of obscurity and presents definite and clear in the light of factual knowledge. But in these empirical investigations a cloud of questions arise which empirical science cannot answer; they rise before the steps of the explorer like a flight of grasshoppers, only to settle a little further on. Empirical science clears its area of mystery by putting away these questions not by answering them. It does not issue in complete knowledge but in unsolved problems and unanswered questions. In the study of empirical science all the questions of metaphysics thrust themselves on the inquirer and crowd him up to a higher point of view from which he can see the particular in its relation to the universal. In these questions we are forced to see that the sphere of human intelligence outreaches the sphere of empirical science and encompasses it; in them empirical science verifies the words of H. Spencer, that "there must exist some principle which, as the basis of science, cannot be explained by science." That which is held in the cup cannot contain the cup. In studying empirical science, the observer necessarily comes in sight of a reality transcending and encompassing the observed phenomena, the existence of which he must acknowledge, but which empirical science cannot fathom nor comprehend—a sphere of intelligence encompassing empirical science as the sea encompasses the land. Travel within the sphere of empirical science in whatever direction you will, sooner or later you come in sight of that all comprehending ocean.

"So in a season of calm weather,
Though inland far we be,
Our souls catch sight of the immortal sea
Which brought us hither;
Can in a moment travel thither,
And see the children sport upon the shore,
And hear the mighty waters rolling evermore."

2. Philosophy solves these unsolved problems and answers these unanswered questions of empirical science; it comprehends it, its facts and its factual classes and laws, in their relations to the truths, laws, ideals and ends of reason. This office of philosophy Lange recognizes: "If the men of science voluntarily come back to philosophy without departing from the strictness of scientific method, . . . if philosophy, instead of being an extreme, rather forms a link between the most various sciences and effects a fruitful interchange of positive results, then we will admit that she is capable once more of the great function of holding up to the age the torch of criticism, of gathering the rays of

knowledge into a focus, and of advancing and regulating the revolutions in the historical progress of thought.”*

But philosophy, while it answers the questions and solves the problems of empirical science, itself starts new problems and questions which it cannot solve. For the solution of these problems and questions philosophy must pass onwards to theology. Philosophy can interpret empirical science and give the *rationale* of its phenomena; but, like empirical science, it must rest on a principle which, as the basis of philosophy, philosophy cannot explain.

That principle is the existence of the supreme and absolute Reason, which, as ever energizing in the universe, we call God. Here the intellect reaches the highest summit of thought and rests. Not that we have cleared away all mystery. The mystery of God remains. We cannot comprehend God because by the knowledge of him we comprehend all else. But we have attained a position from which we can clearly see all that lies beneath. And of God we know that the reality of his being is assured, because without it science is meaningless, philosophy is impossible and knowledge vanishes like a dream. His absolute rationality, power and love are assured, because these are the positive ideas of God by which we find the unity, the significance and the reality of all that is. Our knowledge of him is positive, though it is limited. Thought cannot comprehend God, but by Him it comprehends the universe. Without God the discoveries of physical science only make the universe the more inexplicable; they reveal its physical greatness and complexity, but they reveal it expressing no rational thought, accomplishing no rational end, existing only as the abode of the dying and a mausoleum of the dead, or as an ocean of heaving forces producing only bubbles that vanish as soon as they are formed. But when we know God we see in the universe reason supreme and universal; almighty power obedient to the supreme reason, ever expressing the thoughts of perfect wisdom in acts of perfect love; a rational and moral system to which the system of nature is subordinate and in which the ends of righteousness and benevolence are progressively realized forever; rationality ultimate, all-pervading, all-controlling, expressing itself in all created things. God is the greatest of mysteries and the clearing of all other mysteries. The darkness and clouds about his throne are gathered from the face of the universe, leaving it in light. Deny God, and the darkness and clouds spread again over the face of the universe.

Thus science in its lower grades goes to school to theology, carrying the hard questions and unsolved problems which transcend its sphere

* Geschichte des Materialismus, B. II., sect. 2, chap. 1, note A.

to theology to explain. Theology is the science of sciences, the philosophy of philosophies. As Lord Bacon says: "Another error . . . is that after the distribution of the particular arts and sciences, men have abandoned universality or *prima philosophia*. This cannot but . . . stop all progression. For no perfect discovery can be made on an exact flat or level; neither is it possible to discover the more remote or deeper parts of any science, if you stand but on the level of the same science and ascend not to a higher science."*

IV. The largest unity which science in a lower grade attains is incomplete and finds its completion in a higher grade. In transforming spontaneous knowledge into reflective, thought necessarily culminates in knowing the manifold of reality in unity. In this, empirical science culminates. The unities at first found are small and partial. But with every advancement of knowledge they comprehend a wider range of reality. Man comes to know the earth, the solar system, the sun and stars themselves as a system. He knows general laws of wider and wider comprehensiveness till he has come to the laws of gravitation and of the conservation and correlation of forces. He gains the idea of the Cosmos, or system of nature. How immense the labor of human thought and the progress of human knowledge before even the idea of a Cosmos was possible! This is the largest unity attainable by physical science; and this unity it cannot attain except by the mathematical and philosophical principles of noetic science; nor is it an all-comprehending unity, for it excludes all rational free agents. The mind then recognizes itself as a rational, moral and free being, and others like itself; it forms unities of the family, the tribe, the nation, the human race; it passes into philosophy and discovers speculative, ethical, æsthetic and teleological systems. It extends its thought also in time and in various ways brings into unity the succession of beings and energies through immeasurable periods of the past and the future. As the mind pushes on in this process it necessarily comes at last to the problem, what is the unity which comprehends all reality? What is the one system in which all systems are included? How is the all one? Neither empirical nor noetic science can answer this question. It can be answered by theology alone, in the recognition of the Absolute Reason, whose eternal and archetypal truths the universe expresses, and whose wise and beneficent ends the universe in its ongoing is evermore realizing. In the knowledge of God we comprehend the all in the unity of one rational system.

This effort to find the unity of the manifold is not accidental or optional; it is a necessity of human thought; for thought is nothing

* Advancement of Learning, B. I.

else but apprehending a reality, distinguishing it from other reality, and finding its unity with other reality in some relation. All thought by its nature, and pre-eminently scientific thought, culminates in finding the unity of the manifold. All thinking necessarily tends to seek the unity of the All. Accordingly Comte, complete positivist as he was, came upon this problem and suggested that it may be solved sometime by the discovery of some one all-comprehending law, under which all facts may be generalized in one formula, as a multitude of facts are now generalized under the law of gravitation. In his "Hierarchy of the Sciences," he was unconsciously trying in another direction to solve the same problem. In every period of active investigation in natural science, the investigators come face to face with the problem and attempt some solution. They cannot avoid it; it is a necessity of human thought. They cannot solve it empirically; it can be solved by theology alone.

V. Scientific thought legitimately developed necessarily culminates in Theology, and in it alone finds the solution of its own ultimate problem and completes itself as science.

Human knowledge, of course, can never be complete as the knowledge of all that is. Remoteness of space and of time, the complexity and reconditeness of what is accessible to observation must always hide much from any finite mind. But to know all that is accessible to investigation respecting any object or class of objects, theology is essential. We have seen that science, in its three grades, aims at ascertaining what any particular reality is in its own factual and distinctive properties, and what are its factual relations to other realities; how it is related to the truths, laws, ideals and ends of reason; and how it is related to all reality in the unity of one all-comprehending system. The last of these three questions of science is the ultimate question of reason. It is a question which scientific thought fully developed necessarily asks and tries to answer. It is a question which thoughtful men always do meet and try to answer. We have seen complete positivists like Comte, as well as more recent scientists, busying themselves with it and trying to answer it by widening natural laws or constructing cosmogonies. Others have offered as an answer Monism, whether Materialistic or Pantheistic. Some have tried to comprehend all reality in unity by the idea of substance; others by the idea of cause. Others have fallen into Dualism; as in the Zendavesta, Ahriman is the eternal principal of evil, symbolized by darkness, and Ormuzd is the eternal principle of good, symbolized by light; as in some forms of Gnosticism, matter is eternal and the source of evil, and spirit eternal and the source of good. Even the Deist verges on dualism, for to him the universe is a machine and outside of it is a machinist who made it, but

who aside from this is scarcely recognized as in unity with it in any way.

All these are theological answers showing man busy through all the history of human thought with this ultimate problem of human reason. The only true and satisfactory solution is Theism, which finds the unity of the all in the idea of the supreme Reason expressing its truths and laws, realizing its ideals and ends in a rational system comprehending all that is.

And this gives us the rationale of science itself, which in every stage has no other end than to discover the universal in the particular, the necessary in the contingent, order and law in the accidental and unregulated, reasonableness in the complexity and confusion of phenomena, in a word, to find Reason in all spheres and relations of the universe. Theism is the doctrine that the universe is grounded in reason and regulated by it, and that it constitutes, with the Supreme Reason whose thoughts it expresses, whose laws it obeys, whose wise and beneficent ends it realizes, one all-comprehending rational system.

All scientific thought naturally and legitimately issues in Theism. Empirical science is compelled, consciously or unconsciously, but by the inmost nature of thought, to become metaphysical, and metaphysical science to become theological. It is the legitimate and necessary development of human thought. Thus the discoveries of science are revelations of God; they are the discoveries of the action of things according to the law of their being, they are the recognition of rationality underlying phenomena, of the ideas and principles and laws of reason as the matrices in which all things are cast, the archetypes of which all things are types. But if the universe is thus pervaded by rationality, thus cast in the mold and stamped with the mintage of reason, then we are brought into the presence of God the supreme reason in the very discoveries of empirical and philosophical science. On the other hand, the silence and the perplexities of both must be carried over to theology for explanation. Alike their discoveries and their perplexities are "steps up to God."

Comte insists that the efficient cause must be excluded from scientific inquiry, because, if once admitted, the whole of theology must be admitted with it. We may go farther; once admit the legitimacy, in any particular, of that line of thought which I have designated as philosophy, and you must admit theology. And this is only saying that theology is inevitable, if it is legitimate to inquire for the rationale or reasonableness of phenomena, to ask whence they are and for what rational end they exist, to study them in the light of the principles by which the true is distinguished from the absurd, in the light of the law of right, the ideals of perfection and the rational distinction of good

and evil. The three grades of science, therefore, are interdependent, and, though distinguishable, are inseparable as the parts of one vital organic growth. In investigating we begin with the seen and trace it up to the unseen, into which the roots of all science strike deep and wide. But in the order of dependence it is the invisible that reveals itself in the visible, the spiritual in the natural. Far as the tree of knowledge spreads its branches leafy and fruitful before our eyes, so far it spreads its roots in the unseen. "For the invisible things of God from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead." (Rom. 1:20.) In the words of I. H. Fichte: "It is now time again to install Theism, that inextinguishable and fundamental conviction of humanity, as a science in its true significance; but therewith equally to free it from so many obstructions and veils which long enough have darkened its true light. Theism is neither an hypothesis grubbed out by one-sided speculation, as some represent it; nor is it an invention of priestcraft nor of superstitious fear, old ways of representing it which one still unexpectedly meets. It is also not the mere confession of any exclusive school or religion. But it is the ultimate solution of all the world-problems, the unavoidable goal of all investigation, silently effective in that which externally denies it."*

VI. Science in each higher grade reacts to stimulate investigation in the lower. Without this stimulus from the ranges of knowledge opened by the higher Reason, man would stagnate in savagery. The undying impulse to scientific investigation is not mere curiosity to know facts, but it is the longing to know the origin, the ground, the law, the *rationale* of facts. Man is moved to investigation not merely to answer the question, What is it? but much more to answer the questions, Whence? How? Why? Wherefore? It is not by accident or continuous error, but by the necessities of human thought, that in all ages the study of physical science has issued in Cosmogonies, and that to-day questions of Cosmogony and Theology attract so much attention in connection with scientific investigations. Prof. Tyndall says: "An impulse inherent in primeval man turned his thoughts and questionings betimes towards the sources of natural phenomena. The same impulse inherited and intensified is the spur of scientific action to-day. Determined by it, by a process of abstraction from experience, we form physical theories which lie beyond the pale of experience, but which satisfy the desire of the mind to see every natural occurrence resting on a cause. In forming their notion of the origin of things, our earliest historic ancestors pursued as far as their intelligence per-

* Theistische Weltansicht; Vorwort, S. ix.

mitted the same course.”* The same has been commonly exemplified in the history of science. Says Lange: “With the exception of Democritus, scarcely a single one of the great scientific inventors and discoverers of Greece and Rome belongs to any school of Materialists; but we find a long series of men most worthy of honor, who belonged to schools of the most opposite tendency possible, idealistic, formalistic, or even enthusiastic. Mathematics is especially to be noticed. Plato, the father of an enthusiasm sometimes beautiful and of deep meaning, sometimes misleading and fanatical, is still the spiritual father of a series of investigators who brought mathematics to the highest point which it attained in ancient times.” After adducing various historical exemplifications of his position, Lange adds: “The small part which materialism has had in stimulating scientific investigation is not accidental, nor can it be ascribed to the contemplative quietism of Epicurus; but the fact is that, in those who achieved anything for the progress of (physical) science, the ideal element was a power in the closest connection with their discoveries and inventions.”† To the same purport are the words of Humboldt: “In Plato’s high appreciation of mathematical development of thought and in Aristotle’s morphological views embracing all organisms, lay the germs of all later advances of physical science.”‡

This undying desire to find the spiritual in nature is exemplified in Shelley. He was an atheist. He vauntingly wrote his name on the rocks of the Alps, “Percy Bysshe Shelley, Atheist.” Yet in his letters he says that he loves to think of a fine intellectual spirit pervading the universe. It is the pathetic cry of a refined and cultivated mind imprisoned in the negations of atheism, yet unable to repress its own rational intuitions and yearning to commune in nature with a fine intellectual spirit like its own. It is the delicate spirit Ariel, imprisoned by a malignant witch in a cleft pine, and writhing to escape and soar in its native empyrean.

VII. The claim that the empirical science of nature is the only and exclusive science, contradicts the constitution of the human mind, the essential nature of human thought, and its entire history. This is an inference from the foregoing discussion. I have already alluded to this claim. From the position which we have now attained, we also see that empirical science, far from being justified in this claim, cannot exist as science by itself exclusive of science in the higher grades; but that the three grades, distinguishable but inseparable, are all essential to the completion of scientific thought on any object of investigation.

* Address before British Association, Belfast, 1874: *Sub initio*.

† Geschichte des Materialismus. Vol. I., pp. 92, 93. Book I., Section I., Chap. iv.

‡ Cosmos, Otté’s Transl. Vol. II., p. 176.

Prof. Lotze says: "The world is certainly not so constituted that the individual fundamental truths which we find dominating in it hang together according to the poor pattern of a logical superordination, co-ordination, and subordination. They form rather a texture so woven that they are all at the same time present in every bit and fold of it. You can, according to the need you feel, make every one of these threads the chief subject of your consideration; but you cannot do this at all, or at least you cannot do it in a useful way, without taking account at every instant of the other threads with which it is indissolubly united."*

The incompleteness and lack of significance of the empirical science of nature when isolated from science in a higher grade may be illustrated by the study of a book. We would study Homer's *Iliad*. The first step must be to learn the letters and the order of their grouping in words. We accordingly proceed to examine them with scientific accuracy; we arrange them in classes according to resemblances, and observe various uniform sequences of them in words. This is the empirical science of the phenomena presented in the book. But after all this study we know only the phenomena of the book in their classes and uniform sequences; that is, the letters and the words. We do not understand the book till we discover the thought which these letters and words express, and comprehend the whole in its unity and design as an epic poem. This part of our study is analogous to philosophy. But when we read the *Iliad* we know that it expresses the thought of an intelligent being who was its author. This corresponds to theology. The study of the letters and their arrangement in words is the first department of knowledge respecting the book, indispensable to any knowledge of it. But it would be preposterous to say that this is the complete and only knowledge of the poem. So in the study of nature, the observation, classification and co-ordination of phenomena, which we call empirical science, is only the learning of the letters, classifying them as in a case of type by resemblance, and co-ordinating them in words. But this no more gives a real knowledge of nature than the knowledge of the letters and of spelling gives a complete knowledge of Homer's *Iliad*. So difficult is the task of learning to read that we do not wonder that the attention of children is wholly occupied with the letters and words, and that they at first read mechanically without taking the sense. And so vast is the book of nature and so laborious the process of learning to read it, it is not wonderful that its students should stick for a time in the letter and read mechanically without

* Philosophy of the last forty years, by Prof. Lotze: *Contemporary Review*, Jan. 1880.

taking the sense. But maturer knowledge and further intellectual growth will take them beyond this childishness, and make them, not merely observers, but also interpreters of nature.

I will give another illustration. Science teaches that all thinking, volition and emotion involve molecular action of the brain. Suppose some instrument invented by which you can look through the skull and observe this molecular action. You find some Shakespeare composing *Macbeth*, some Newton writing the *Principia*, some Paul glowing with self-sacrificing love; and in each case you make an exact chart of the course or orbit of every moving molecule. You have an exact delineation of the action of the brain; but it bears not the remotest resemblance to the thoughts and feelings expressed by it, to the imaginative creation of *Macbeth*, the mathematical demonstrations of the *Principia*, the self-sacrificing love of Paul. You have observed the phenomena, you have totally missed their significance. Suppose, now, an infinitesimal inhabitant of the brain, to whom the brain is the whole known universe and to whom the motions of its molecules are relatively as great as to us the motions of the planets. Suppose this infinitesimal being provides himself with telescope and microscope and observes all these motions of the molecules, classifies them by resemblance, and co-ordinates them in their uniform sequences. Now he claims that he has created a science of the universe—this brain which he lives in being to him the universe—and yet he entirely misses the thought, the volition, the emotions expressed in these movements, and has no knowledge of the intelligent being whose thought, volition and emotion the action of the brain expresses. How plain it is that this infinitesimal being deludes himself with the mere show of knowledge while he misses its deepest reality. And yet it is no more a mere show without reality than is the science of the natural universe which confines itself to the resemblances and sequences of phenomena, with no apprehension of the thought which the phenomena express, or of the supreme intelligence in which they originate, or the rational system in which they exist.

Ludwig Noiré, speaking of Büchner's materialism, compares it to a child's description of music, who describes it as the action of the player putting his hand on the keys, moving them up and down, and crossing his arms, but leaves out the music.*

VIII. Another inference from the foregoing discussion is that science in the three grades must be in harmony with itself. These three grades of scientific thought are but the different processes of intelligence, each necessary to the other, all necessary to complete intelligence. When they are rightly apprehended conflict is impossible.

* *Die Welt als Entwicklung des Geistes*: ss., 18, 19.

We have, therefore, rational ground of certainty that the progress of empirical and noetic science can never conflict with theology nor invalidate it. And it is equally certain that the true scientific spirit is never hostile to the truly religious spirit which rules all right theological inquiry. Scientists continually insist on the "searching, open, humble mind;" and Jesus said: "Except ye become as little children, ye shall not enter into the kingdom of heaven." The obscuration of religious belief does not result from science, but from the incompleteness or perversion of science. We have reasonable ground of assurance that any such obscuration attendant on the scientific study of nature must be temporary, and the ultimate and abiding issue of scientific investigation and progress must be in the future, as it has always been in the past, to confirm man's belief in God, and to purify, illuminate and enlarge the knowledge of Him. Frau von Marenholz-Bülow relates the following: "Froebel said, 'Let the empirics work in their quarries; they will bring treasures to light which are also necessary.' 'It appears to me,' said I, 'that the investigators of nature, who work in the dark mines of the material world by the light of their own lanterns and imagine that there is nothing brighter, no sunlight, must sometime or other break through the surface above, when they can no longer deny the brighter light of the sun.'"*

Mr. Lewes, in the opening of the "Problems of Life and Mind," says: "Some considerable thinkers . . . argue that religion has played its part in the evolution of humanity—a noble part, yet only that of a provisional organ, which in the course of development must be displaced by a final organ. Other thinkers, and I follow these, consider that religion will continue to regulate the evolution; but that to do this in the coming ages, it must occupy a position similar to the one it occupied in the past, and express the highest thought of the time, as that thought widens with the ever-growing experience." I accept this demand on theology as reasonable, though I differ from Mr. Lewes as to what complete compliance with the demand implies. However far empirical and rationalistic science may advance, true theology must still be competent to maintain its position as the Science of sciences and the Philosophy of philosophies. It must be competent to take all the results of the highest thought and integrate, interpret and vindicate them in a rational system. However far science may advance, it can never transcend Theism, which recognizes perfect Reason as the ultimate ground of the universe, and its truths, laws, ideals and ends as the archetypes which the universe is progressively expressing. Man cannot overleap reason any more than he can over-

* Reminiscences of Froebel, p. 267.

leap the zenith of the firmament; for reason is man's intellectual firmament, the everlasting sunlight which lies about him; and yet he carries it with him, and is always beneath its zenith wherever he goes. Science by no advancement can set aside the supremacy and universality of reason; for it would set aside the godlike power of man which makes science possible, and annul its own essence and calling as science; for science consists essentially in finding the product and expression of reason in all that is. Theism therefore gives the grand reality by which theology is competent to integrate, interpret and account for all things under any possible progress of science. The progress of reason can never transcend reason. The progress of science may purify, elucidate and enlarge theoretical knowledge, but it can never annul the Theism of which true theology in its remotest ramifications of doctrine is the exposition.

I accept, therefore, the words of President Eliot of Harvard University, though perhaps giving a meaning different from his own to his expressions: "Science has thus exalted the idea of God, the greatest service which can be rendered to humanity. Each age must worship its own thought of God, and each age may be judged by the worthiness of that thought. In displaying the uniform continuous action of unrepenting nature in its march from good to better, science has inevitably directed the attention of men to the most glorious attributes of that divine intelligence which acts through nature with the patience of eternity and the fixity of all-foreseeing wisdom. A hundred lifetimes ago a Hebrew Seer gave utterance to one of the grandest thoughts that ever mind of man conceived. . . . This thought, tender and consoling toward human weakness and insignificance as a mother's embrace, but sublime also as the starry heights and majestic as the onward sweep of the ages, science utters as the sum of all its teaching, the sublime result of all its searching and its meditations, and applies alike to the whole universe and to its last atom: 'The eternal God is thy refuge and underneath are the everlasting arms.' " *

§ 61. The alleged Conflict of Natural Science and Theology.

I. Conflict between natural science and theology can arise only from error or incompleteness of knowledge on the one side or the other. A true and complete science of nature can never be in conflict with true and complete theology. Students of natural science do no violence to science in remaining theists or Christians, as multitudes of them have done. Religious unbelief does not spring from science but from ig-

* Report of Speech at the opening of the Am. Museum of Natural History.

norance or error either in respect to science or theology. We do both natural science and theology great injustice in using language which implies that physical science is, of itself as science, in conflict with theology, or that theology is in conflict with it, or that as theologians we need to be afraid of its discoveries or in an attitude of opposition to its progress. Empirical science declares the particular realities of the universe and their factual relations and laws; and it is impossible that the true science of the facts and laws of the universe can be in conflict with the true science of the God of the universe.

1. Conflict may arise from the incompleteness of knowledge incidental to its progressiveness. Thought proceeds from apprehension through differentiation to unification, from thesis through antithesis to synthesis. Thought, therefore, at a certain stage of its progress is necessarily occupied with differences, opposites and antitheses. If it stops there it will mistake these for contraries or contradictories; but if it push on to its completeness it may see that they are merely complementary aspects of the same reality, or different particulars related and harmonious in a larger unity. This liability to mistake is incidental to the progress of knowledge within the sphere of empirical science; and we cannot escape the same liability in the transition from empirical to philosophical and theological knowledge. But in fact these seeming contradictions may be only the contrasts necessary to a complete and full-orbed knowledge.

Incompleteness of knowledge is also incidental to the specialties to which students are shut up by the vastness of the sphere of knowledge and the limits of the human mind. When one devotes himself exclusively to the empirical study of nature, the world of matter heaves its hulk up between him and the spiritual light, as the earth on which we dwell comes between us and the sun and shrouds us in night. And such is now the extent of natural science that one must devote a lifetime to master a subdivision of a particular science. And this limitation of the sphere of life-long studies unfits for comprehending the larger unities of philosophy and theology.

Conflict may also arise from positive errors as to particular realities on the one side or the other. These are errors of observation or inference which further investigation will correct; and the correction of the error ends the conflict.

2. Conflict may arise from an error of method; from overlooking the distinction of empirical, noetic and theological science. Empirical science may intrude into the sphere of philosophy and attempt to decide philosophical and theological questions by empirical methods. So Laplace argued that there is no God because he had never found him with the telescope; and as it has been argued that there is no spirit in

man, because the anatomist has never discovered it. On the other hand, theology has intruded into the sphere of natural science and attempted to settle questions of fact which can be determined only by empirical observation and inference.

3. Conflict may arise from the claim of science in one grade to be the whole of human science, to the exclusion of all other.

I am not aware that philosophy or theology ever made this claim; though they have often fallen into error by not sufficiently recognizing their dependence on empirical science for their factual contents. But the empirical science of nature has again and again asserted its claim to the whole of human knowledge. And it is this claim, persistently and widely made now, which is the source of the present antagonism of some students of natural science against theology.

II. The reconciliation can be effected only by the advancement of science in each grade to completeness by the progressive discovery of truth and elimination of error.

1. The claim that empirical natural science includes all science, involves complete atheism and is entirely irreconcilable with theology. It denies that man is capable either of psychological, philosophical or theological knowledge. If man is incapable of knowledge that transcends the empirical, he is incapable of knowing God. With those who make this claim there is no propriety in discussing the question of the existence of God. Their false theory of knowledge shuts us out from approaching that question. The question with them is as to the reality of human knowledge. We demonstrate from the constitution and history of man that he is capable of noetic and theological knowledge, and that the denial of this involves equally the denial of all human knowledge. All atheism rests on principles which necessarily involve complete agnosticism. If man cannot know God, he cannot know anything.

2. Students of physical science often assert that its method is entirely different from the method of metaphysics and theology; and that therefore conflict is inevitable and irreconcilable. In seeking reconciliation on this point we must inquire what the true method is and wherein on either side there is a deviation from it. The true method will accord with the law that knowledge must pass through the three grades which I have elucidated. The difference of method has originated in the fact that physical science has tried to limit itself within pure empiricism, while philosophy and theology have sometimes tried to proceed by *a priori* principles and abstract notions without seeking their basis in observed facts of experience. So far as on either side investigation has been thus partial, it must be corrected and broadened. On each side we already see this process far advanced. Comte

made the attempt rigorously to isolate science within empirical knowledge through the senses. But it has been found impossible to carry it forwards in this isolation. We find that physical science is now carried through the three grades of empirical, noetic and theological thought. Admitting the reality of the self-evident, unproved knowledge given in sense perception, scientists accept as real various metaphysical ideas, such as matter, force, cause, atoms, ethers; they acknowledge the first principles of reason to be *a priori* to the individual and regulative of all thought. The agnostics acknowledge the existence of the Absolute Being, though unknowable, without which it is impossible to find the unity of the cosmos or to believe the real existence of anything; materialistic scientists hold a doctrine which implies that matter is the Absolute Being; and here they both pass over into theological thought. On the other hand, the theist, starting with not only sensible, but also mental and spiritual reality observed in experience, and reasoning according to the same rational principles, attains the knowledge of the Absolute, not merely as an unknowable, but as the absolute Reason. So far then we already find agreement of method, and the old objection, that philosophy and theology are empty speculations not founded on observed facts, disappears. The difference now is simply that the theist accepts all the facts of experience, while the agnostic takes cognizance of only a part of them; the method is essentially the same; the difference is in the reality investigated, the agnostic disregarding one hemisphere of man's being and all the spiritual universe which gives its significance to the material universe and makes a scientific knowledge of it possible. At present the conflict arises not so much from difference of method as from the endeavor to isolate knowledge within the limits of the phenomena of sense. Here, however, is developed an antagonism of physical science not merely to theology, but also to philosophy, and to the study of language, literature, politics, history, and all study of man other than physical and physiological. Learning, erudition and researches in great libraries are stigmatized as idle activities and contrasted with the solid and practical value of physical and physiological studies. This isolation and superficiality in the intellectual sphere extends to the moral. A tendency is already apparent to paralyze the powerful motives of action in man's spiritual and moral constitution, to dry up the deepest and richest springs of motive and emotion and of interest in life, and to sneer at the treatment of practical questions from the purely moral point of view as sentimentalism. If continued, it must be antagonistic to the richest and most inspiring creations of the imagination in fiction, poetry and art. These must come then from beneath nature, not from above it; they must be realistic and sensuous, holding man down beneath nature, not the

inspiration and ideals of reason lifting him above it. A merely sensuous poetry and art must be the result, which Walt Whitman and Swinburne in poetry and Gautier in fiction already foreshadow.

It is also the boast of physical science that it is intensely practical; that the knowledge which it imparts is especially useful to mankind. Comte goes so far as to say that the stellar astronomy, such as the investigation of the binary stars, ought not to be studied because it is not available for practical use. In this respect our modern illuminism is inconsistent with itself; for it holds it to be necessary to a candid seeking of the truth, to disregard its bearing on the interests of life. Christianity agrees with physical science in its estimate of the practical value of knowledge. It is also consistent with itself and with all sound philosophy in teaching that knowledge, dissociated from its bearing on the conduct of life and on the welfare of man, is even as knowledge incomplete and misleading. It warns us against resting in a merely speculative belief, as knowledge which puffeth up. It inculcates not knowledge merely, but wisdom, which is knowledge warmed and vitalized with love, or love illumined with knowledge; wisdom which seeks the best ends by the best means. The practical ends of the skeptical scientist are, like his knowledge, limited within the sensuous; his highest conception of the good is necessarily Hedonistic; his useful knowledge must be of the Gradgrind sort. But Christian theism aims through knowledge to develop the spiritual life in its relation to God and the whole moral and spiritual realm. It strikes the noblest and most powerful motives; it opens the deepest and purest and inexhaustible fountains of interest in life; it illuminates the life of sense with the light of the spirit, and dignifies material interests by showing their relation to the divine. The natural sciences therefore have no exclusive or pre-eminent claim to be useful knowledge, or to be the exclusive or even the pre-eminent studies in a college. On the ground of utility alone I claim the higher place for the study of man himself; not merely human physiology, but those studies fitly called "the humanities:"—the languages, literatures and religions of the world; the great courses of human thought; the questions which have occupied the human mind; the products of genius; the progress and characteristics of civilization; the conditions and laws of individual action and of the constitution and welfare of society; and all that belongs to the history of man. Herbert Spencer objects that the dead facts of history are useless. I reply that all facts are dead and useless, except as their significance is seen through their relation to some principle, law or end. This is no more true of the facts of human than of natural history. A dead man is no more dead than a dead dog. If we must compare the value of mere facts, why is not the knowledge that Cæsar crossed the Rubicon as useful as

the knowledge of the average weight of the human brain? Why is not the knowledge of the migrations of men and the founding of empires as useful as the knowledge of the movements of glaciers in a distant geological epoch? Why are we not as much benefited by knowing the names of Aristides and Socrates as by learning to call a certain mollusk no longer a clam, but a *Mya Arenaria*? Why is it more useful to men to spend weeks in hatching crabs' eggs than to spend the time in studying the philosophy of Plato or Aristotle? I accept the test of utility. I agree with Milton:

"That not to know at large of things remote
From use, obscure and subtle; but to know
That which before us lies in daily life,
Is the prime wisdom."

Yet even so the utility which consists in satisfying the animal wants is subordinate to a higher utility in developing, cultivating and ennobling the whole man, intellectually, morally, æsthetically and spiritually, as well as physically.

The tendencies of which I have spoken are not inherent in physical science nor in the scientific method which is essentially the same in every sphere of knowledge, but are due to the unscientific exclusion of the whole sphere of spiritual reality from scientific recognition—an exclusion which results entirely from materialistic theologizing. The assertion that this exclusion belongs essentially to the scientific method is entirely without reason.

3. When conflict between theology and natural science arises from incomplete knowledge or from error respecting facts, reconciliation is possible by further investigation. If we encounter a difficulty of this sort which we cannot remove, the reasonable course which scientific thought itself demands, is to hang it up, in the confidence that in the progress of knowledge and of mental growth, the difficulty will be removed and the harmony of natural science and theology in that particular made plain. In conflicts thus arising and thus treated, empirical, noetic and theological science reciprocally correct and complete each other, the distinction of the three is more correctly appreciated, and the demarcation of their respective limits more exactly determined and more scrupulously observed. The reconciliation has often been attained by discovering the errors of physical science. In the classic Walpurgis night in the second part of Faust, Goethe has introduced Thales and Anaxagoras apparently for no reason but to give him opportunity to ridicule the Huttonian or Vulcanian Theory of geology. When the Wernerian Theory was in vogue and marine fossils were supposed to have been deposited from the flood, it was a

common objection that no fossil remains of man had ever been found in Asia. I remember that when in college I heard a lecture from the president elaborately answering this objection and expressing his confidence that so soon as researches should be made in Asia, human fossils would be found. In other cases the reconciliation has been found by recognizing the error of some theological tenet. For though no enlargement of science can set aside the essential elements of theism, yet new discoveries in science may require a readjustment of some of the tenets of theology in accordance with them. This has often been exemplified. When Dr. Francesco Redi, over two hundred years ago, announced that organic life does not originate by spontaneous generation, Italian theologians cried out against it as contrary to the Scripture; for did not the carcass of Samson's lion generate bees? In the eighth century, Virgilius, Bishop of Salzburg, in Bavaria, was threatened with excommunication for teaching the existence of antipodes. Zachary, the pope, wrote to Bishop Boniface respecting him: "As to the perverse and wicked doctrine which against God and his own soul he has advanced, if it shall be ascertained that he declares that there is another world and other inhabitants beneath the earth, then call a council, deprive him of his sacerdotal honor, and excommunicate him from the church." If theology intrudes into the sphere of empirical science, if it decides that the earth stands on a tortoise, or is the centre around which the sun and stars revolve daily, or that there are no antipodes, or that organic life is produced by spontaneous generation, it must, with the progress of knowledge, retreat from its false position and accept facts as they are empirically ascertained. Equally must empirical science retreat from its usurped position when it attempts by empirical methods to construct cosmogonies which leave no place for God. Says Dr. Carpenter: "The science of modern times has taken a more special direction. Fixing its attention exclusively on the order of nature, it has separated itself wholly from theology, whose function is to seek its cause. In this (physical) science is fully justified, alike by the entire independence of its objects, and by the historical fact that it has been continually hampered and impeded in its search after truth as it is in nature, by the restraints which theologians have attempted to impose on its inquiries. But when (physical) science, passing beyond its own limits, assumes to take the place of theology, and sets up its own conceptions of the order of nature as a sufficient account of its cause, it is invading a province of thought to which it has no claim, and not unreasonably provokes the hostility of those who ought to be its best friends."*

* Address before British Association: 1872.

On this point Lord Bacon says: "We do not by the contemplation of nature presume to attain to the mysteries of God. . . . If any man thinks, by view and inquiry into these sensible and material things, to attain that light whereby he may reveal unto himself the nature or will of God, then indeed is he spoiled by vain philosophy; for the contemplation of God's creatures and works produceth (having regard to the works and creatures themselves) knowledge; but having regard to God, no perfect knowledge, but wonder, which is broken knowledge. And therefore it was most aptly said by one of Plato's school, 'the sense of man carrieth a resemblance to the sun, which as we see openeth and revealeth all the terrestrial globe; but then again it obscureth and covereth the stars and the celestial worlds; so doth the sense discover natural things, but it darkeneth and shutteth up the divine.' And hence it hath come to pass that divers great learned men have been heretical, while they have sought to fly up to the secrets of the Deity by the waxen wings of the senses."*

Hence the reconciliation of any conflict of natural science and theology must come from patient and earnest study of both, and the progress of knowledge and the mental growth thus attained. So Lord Bacon says: "*Philosophia obiter libata abducit a Deo; penitus hausta reducit ad eundem.*" "As to the conceit that too much knowledge should incline a man to atheism it is an assured truth and conclusion of experience that a little or superficial knowledge of philosophy may incline the mind of man to atheism, but a farther proceeding therein doth bring the mind back again to religion."†

III. The alleged historical antagonism of theology to the progress of science is grossly exaggerated.

1. The majority of those who are memorable in the history of physical science as having contributed to its advancement, have held theological beliefs with no consciousness of their incompatibility with physical science. Even in Greece and Rome the progress of physical science owed little to materialism, but was chiefly indebted to metaphysicians and believers in religion, some of whom, like Plato and Aristotle, had attained more or less clearly to Monotheism. Dr. Draper eulogizes the scientific achievements of the Arabians in the Middle Ages in contrast with those of the Christians. But the Arabians were at the same time intense monotheists. Draper also forgets to account for the fact that the Christian civilization developed the revival of learning, while Mahometan civilization decayed. A considerable number of those distinguished in science have been ecclesiastics, among

* Advancement of Learning, B. I.

† Advancement of Learning, B. I.

whom was Copernicus himself. He published the work announcing his discoveries, as he himself says in his Preface, at the urgent advice of friends, one of whom was a cardinal and another a bishop, and dedicated it to Pope Paul III.*

In the recent centuries the greatest scientific minds have been devout. Sir Humphrey Davy said: "I envy no quality of mind or intellect in others, be it genius, power, wit or fancy; but if I could choose what would be most delightful and I believe most useful to me, I should prefer a firm religious belief to every other blessing; for it makes life a discipline of goodness, creates new hopes when all earthly hopes vanish, throws over the decay, the destruction of existence the most gorgeous of all light, awakens life in death, and from corruption and decay calls up beauty and divinity." Hear Linnæus, in his researches among plants: "God, the eternal, omniscient, omnipotent, I have seen from behind as he passed by and have been awed." Sir Isaac Newton records his testimony at the close of the *Principia*: "This beautiful system of sun, planets and comets could have its origin in no other way than the purpose and command of an intelligent and powerful being. He governs all things, not as the soul of the world, but as the Lord of the universe. He is not only God, but Lord or Governor. We know him only by his properties and attributes, by the wise and admirable structure of things around us, and by their final causes; we admire him on account of his perfections, we venerate and worship him on account of his government." Listen again to the rapt devotion of Kepler, with which he closes "The Harmonics of the Universe": "Thou who by the light of nature hast kindled in us the longing after the light of thy grace, in order to raise us to the light of thy glory, I give thanks to thee, Creator and Lord, that thou hast given me delight in thy creation, and I have exulted in the works of thy hands. I have completed the work which I proposed with such force of intellect as thou hast given me. I have manifested the glory of thy works to the men who will read these demonstrations, so far as my limited mind can comprehend thine infinitude. If I, a worm and a sinner, have set forth anything unworthy of thy counsels, inspire me to correct it and to set forth what thou wouldst have men know. If by the admirable beauty of thy works I have been hurried into any rashness, if I have sought my own glory among men while prosecuting a work intended for thy glory, wilt thou, gentle and compassionate, forgive. And deign propitiously to cause that these demonstrations may promote thy glory and the welfare of men. Praise ye the Lord, ye heavenly harmonies; and ye that understand the new harmonies, praise ye the Lord. Praise God,

* *De Revolutionibus*: Prefatio.

O my soul, as long as I live. From him, through him, and in him is all, the material as well as the spiritual; all that we know, and all that we do not know as yet; for there is much to do that is yet undone.* Hear, also, Lord Bacon in this choir of kingly worshippers: "Thou, therefore, Father, who gavest the visible light as the first fruits of the creation, and at the completion of thy works didst inspire the countenance of man with intellectual light, guard and direct this work, which proceeding from thy bounty, seeks in return thy glory." "If we labor in thy works thou wilt make us partakers of thy vision and thy sabbath. We pray that this mind may abide in us; and that by our hands and the hands of others to whom thou shalt impart the same mind, thou wilt be pleased to endow with new gifts the family of man." When the greatest minds in the history of natural science incorporate such sentiments into their scientific treatises, it is evident that there is no legitimate conflict between true science and the knowledge and worship of God. The depth and grandeur of their religious sentiments accord with the depth of their thought and the grandeur of their intellects, and contrast strangely with the flippancy, the rattling superficiality, and sometimes the envenomed spite of atheistic scientists in their treatment of religion.

2. The historical instances of direct antagonism on the part of the clergy against scientific discoveries are comparatively few. The statements made on this point make the impression that discoveries in science have in all ages been usually opposed by the clergy; that opposition has been the rule, not the exception. This is a gross exaggeration, and the impression which it makes is without foundation. The condemnation of Galileo and of the doctrine of the antipodes are the facts always alluded to; and they have been so noised abroad that the impression seems to exist that the Christian clergy in all ages and countries have made it their business to oppose all scientific discoveries and to excommunicate all who propagate them.† But actual instances of such opposition have been comparatively few. When a scientific discovery has been supposed to directly contradict the Bible or the existence of God, such opposition has arisen. But the great multitude of scientific discoveries have suggested no such contradiction and have encountered no opposition or hindrance from the church. Any one familiar with the history of science has only to recall the historical facts to see that in the great majority of its lines of investigation, science has pursued its course unvexed by opposition from the church or from theologians.

It is true that the Roman Catholic church holds principles incom-

* *Harmonices Mundi*: p. 243. Sub finem.

† For an example of this exaggeration, see Prof. Tyndall on the Sabbath, *Nineteenth Century*, November, 1880.

patible with freedom of thought. The Encyclical of Pope Pius IX. in 1864, throughout its eighty specifications of heresy, seemed to be a bull against the civilization of the nineteenth century. It is apologized for as aimed against only the revolutionary, anarchical, communistic and atheistic outcome of modern thought. Yet it is truly an assertion of the claim of the church to control the thought and conscience of men so that, within whatever spheres liberty of investigation is unrestricted, it is so only as a privilege allowed by the church and liable at any time to be withdrawn. This is itself one of the false positions assumed in times of spiritual darkness and declension, which need to be abandoned as religious thought adjusts itself to the progress of human knowledge. The Protestant Reformation was the true development of Christianity reasserting its primitive and essential spirit and truth, and clearing itself from accretions of error.

But there is gross misapprehension of the opposition of the church to science even in the Dark Ages. Dr. Draper, in "The Conflict Between Religion and Science," maintains that the Catholic church is responsible for the condition of Europe from the fourth to the sixteenth century. Certainly an author is destitute of the historical spirit and utterly incompetent to write history who can make so amazing a generalization and account for the course of events during those centuries by a single cause. He overlooks the political influences attending the decline of the Roman empire, the accompanying dissoluteness and degeneracy of society, the influences of heathenism introducing the voluptuous religions of the East to supplement the decaying Roman worship, the irruption of the barbarians, and the dissolution of society and its institutions as they had existed.

He also confounds the errors of the church with Christianity, and thus includes, in his one cause of the decay, the very influence most effective in resisting it and in bringing out of it at last the revival of learning and the reformation of religion. Says Guizot: "The church was the great connecting link—the principle of civilization—between the Roman and the barbarian world. Her influence on modern civilization has been more powerful than its most violent adversaries or its most zealous defenders have supposed." The introduction of Christianity awakened intense intellectual activity. Questions of the greatest importance were discussed; books of undying value were written; and the universal mind aroused to intense action on subjects vital to the welfare of man. One of the results, so long secured that we forget its greatness, was the overthrow of polytheism and the establishment of monotheism; another was the elevation of the human mind to appreciate the spirit and worth of man, the spiritual worship of God, and all the sublime and renovating ideas connected with the recog-

dition of God, and of man as in his image, subject to his law and redeemed by his love.

Christianity was introduced amid the corruption and enervation attending the decline of the Roman empire, when the people had sunk to the lowest point in luxury and effeminacy, in barrenness of lofty principle, in the corruption of public morals and the prevalence of a sensuous skepticism. Soon after began the irruption of the barbarians which introduced idolatry, barbarism and anarchy. Christianity had its work to begin anew; it did begin it and with success; the barbarians abandoned their idols; government and the supremacy of law reappeared; and at last from the chaos issued a civilization purer, nobler, more full of blessings than the world had ever seen. The wonder is, not that the Christian church fell into error and that Christianity effected so little, but that both the church and Christianity were not swept out of being. Those who have closely studied this history know that, during the darkest ages and the greatest corruption of the church, the real principles of Christianity were working in many directions against the errors and abuses of the times and preparing the way for that reformation of the church and that new civilization, the best elements of which are the development and realization of these Christian principles. It were well for those who ascribe human progress to scientific discoveries and mechanical inventions as its primary cause, to remember that Wickliff had arisen, the morning star of the Reformation, and Huss had aroused his countrymen to intense activity of thought and to religious reform, before printing was invented; that Luther had nailed his ninety-five theses to the church door in Wittenberg before the telescope or microscope existed, before there was a post-office system in England or a carriage on springs in Paris; that Puritanism was in England before the Nuremberg eggs, as they called pocket watches, and had wrought the great revolutions of 1649 and 1688, which laid the foundations of English and American liberty before Watt or Arkwright was born. Always spiritual truth in its work of rousing the mind to action has gone in advance of scientific discovery and mechanical invention.

If Dr. Draper had studied Comte's Positive Philosophy, he might have attained a less superficial view of the causes which have advanced civilization. Comte affirms that the influence of Christianity was powerful in effecting the emancipation of serfs, giving dignity to labor and introducing the industrial civilization which is displacing the wars of conquest and the military civilization of heathen and Mahometan nations. In connection with the elevation of labor, Comte speaks of "the fine spectacle of the holy hands of monks extended to labors before regarded as degrading." Of the influence of Chris-

tianity in the Middle Ages in promoting emancipation, he says; "The spiritual influence is obvious enough. The serfs had the same religion with their superiors and the same fundamental education which was derived from it. And not only did religion afford them rights by prescribing reciprocal duties, but it steadily proclaimed voluntary emancipation to be a Christian duty, whenever the laboring classes showed inclination and fitness for liberty. The famous Bull of Alexander III. on the general abolition of slavery in Christendom, was merely an official sanction of a custom which had been extending for some centuries. The influence thus wrought was not that of moral doctrine alone. The morality was enforced by the persevering action of a priesthood which was opposed to the institution of caste and open to be recruited from every social class, and which relied for the permanence of its organization on the laboring classes, whose rise it therefore constantly favored." Of the new industrial civilization Comte says: "This change constitutes the greatest temporal revolution ever experienced by mankind. If the Greek philosophers had been told that slavery would be utterly abolished, and that the free men of a great and powerful population would subject themselves to labors then considered servile, the boldest and most generous thinkers would have cried out against a Utopia so absurd and utterly baseless."*

Similar influences in the earlier Christian centuries had given dignity to labor, brought the Roman slavery to an end, and set aside the common belief of Greeks and Romans that labor and earning one's own living were unworthy of free citizenship. Plautus makes one of his characters say it is not worth while to give food and drink to the poor man, for it is so much lost to the giver and only prolongs the misery of the receiver.† And Plato teaches that a mechanic has no leisure to be under a physician's treatment; let him try some active remedy and keep about his business. If he recovers he can keep on with his work; if he dies he is rid of his troubles. For if he cannot attend to his business it is useless for him to live.‡ Aristotle says: "We cannot dispense with farmers and mechanics; but these have nothing to do with public affairs and are not worthy of the name of citizen. They are incapable of greatness of soul and cannot have any manliness, because they work for wages and therefore must be of a mercenary spirit. The difference between them and slaves is an external difference only. They ought to be slaves, and would if the State were rich enough to buy them or strong enough to enslave them.

* Positive Philosophy, B. VI., Chap. xi. Martineau's Translation.

† Trinummus, Act 2, lines 339, 340.

‡ Republic, B. III., Chap. xv.

Therefore our free youth ought not to learn any trade, for that would degrade them from citizens to mechanics,"* Three hundred years later Cicero utters the same thought: "What more foolish than to respect the mass of the people as anything, when you despise them individually as laborers and barbarians? The citizen ought to abandon the mercenary occupations of commerce and industry to slaves and freedmen, because no one can be free who is dependent on a salary." He excepted only the higher arts, medicine, architecture, the teaching of philosophy, and commerce on a large scale. And even these are excepted only with the qualification, "*is quorum ordini conveniunt honestae*;" and as to commerce his acknowledgment is only negative, and that with *non admodum*: "*non est admodum vituperanda*."†

Against these deep-seated errors of heathenism Christianity immediately exerted an influence. Christ came as a servant and in explicit distinction from heathen civilization proclaimed the Christian law of service. (Matt. xx. 25-28.) Paul was a tent-maker and taught Christians to do their own business and to work with their own hands; for, he said, if any man will not work neither let him eat. And similar was the preaching of the fathers. Basil says, "Man is a great being;" and Ambrose, "Thou, oh man, art the great work of God." And Chrysostom, "Do not imagine that an injury to a slave will be pardoned as if of no consequence. Human laws recognize a difference between the two classes, but God's law knows none."‡ And again: "Let us not be ashamed of mechanical employment; let us not despise manual labor; let us rather despise idleness and laziness. If work were disgraceful, Paul would not have worked with his own hands; he would not have gloried in it nor forbidden those who will not work to eat." And again: "You say that your father is a consul and your mother a saint. No matter; show me your own life; it is only by this that I judge of your nobility. I call the slave loaded with chains noble and lord, if I see nobility in his life; I call base and ignoble him who, though in the midst of dignities, has a servile spirit."

This same movement, originating in Christianity and borne on through the ages of Christian influences, has in our day completed the emancipation of serfs, and is bringing negro slavery to an end. It has exalted private business to the character of a public function in the service of humanity, and given scope in beneficent industrial enterprise to the ambition and energy once having no sphere but in politics and wars of conquest.

* Prof. Schmidt: *Essai Historique sur la Société civile dans le Monde Romain*: pp. 68, 69, 74.

† *De Officiis*, B. I., Chap. 42.

‡ Homily 22 in Ephes.

In the light of facts like these, Dr. Draper's conception of the history of civilization and his glorifying of the Mahometan and Saracenic power as the vital source of modern progress appear sufficiently ignorant and inane.

3. Scientific discoveries have met more opposition from the students of natural science themselves than from theologians. Copernicus, in the dedication to Pope Paul III. of his work "*De Orbium Coelestium Revolutionibus*," in which he announced and defended his theory, says that he had kept his book by him four times the nine years required by Horace because he knew how absurd his doctrine would appear; and Whewell adds: "It will be observed that he speaks of the opposition of the established school of astronomers, not of divines." The theory encountered great opposition from astronomers, as Copernicus had anticipated. It made its way slowly to acceptance by scientific men. Lord Bacon persisted in rejecting it to the end of his life. Whewell says: "Perhaps the works of the celebrated Bishop Wilkins"—a divine it will be noticed—"tended more than any others to the diffusion of the Copernican system in England." And Wilkins's books were published in 1638 and 1640, nearly a hundred years after Copernicus had published his system.* The great physicians and philosophers of the close of the seventeenth century and the beginning of the eighteenth, Huygens, Bernouilli, Cassini, Leibnitz, nearly all the disciples of Descartes, opposed Newton's system of gravitation. "The Newtonian opinions had scarcely any disciples in France, till Voltaire asserted their claims on his return from England in 1728; until then, as he himself says, there were not twenty Newtonians out of England."† Of Harvey's discovery of the circulation of the blood, Aubrey, in his "*Lives of Eminent Persons in the Seventeenth and Eighteenth Centuries*," says: "After his Book of the Circulation of the Blood came out he fell mightily in his practice, and 'twas believed by the vulgar that he was crack-brained; and all the physicians were against his opinion and envied him." And after his discovery was accepted in England, it was still opposed abroad; so that when, in later life, he was urged to publish the results of his researches on generation, he declined, because he was unwilling again to incur the "great troubles" and "to stir up the tempests" which, he said, "my lucubrations formerly published have raised." The controversies of the believers in phlogiston against those who recognized the discovery of oxygen were long and bitter. Dr. Jenner's discovery of vaccination was opposed and denounced by physicians. The Academy of Paris attempted to overthrow the micro-

* Whewell, *Hist. Inductive Sciences*, Vol. I., pp. 267, 272, 275.

† Whewell, *Hist. Inductive Sciences*, Vol. I., p. 429.

scopic discoveries of Swammerdam and Leeuwenhoeck, a century after they were made, with the sneer, "One can generally see with the microscope whatever one imagines." The *Edinburgh Review* (January, 1879) says: "The faculty of unconscious and involuntary movement caused by the impact of mechanical impressions, which is now a well understood and thoroughly accepted function of nerve organization, was received as a dire heresy when it was first propounded by Dr. Marshall Hall." When, in his second memoir on the subject before the Royal Society, Dr. H. described the movements of a headless turtle, "a derisive note was scrawled upon the paper by one of the pundits of the Society, inquiring whether the turtle was alive after it was made into soup. It is a part of the history of this discovery that, in 1837, this second memorial of Dr. Hall was rejected by the Council of the Royal Society as unworthy of acceptance."

I will not multiply instances which the history of almost every new discovery furnishes. But the clergyman may well say, as *Æsop's* wolf did when he saw the shepherds eating a lamb, "If I had done this, what an outcry would have been heard!"

IV. Theologians should recognize the fact that the progress of knowledge may necessitate the correction of theological opinion in order to adjust it to newly discovered facts, laws or truths. If a person holds a theological doctrine which obliges him to object to vaccination or to lightning rods as interfering with the providence of God, the progress of science requires him to amend his theology. Theology, like all human knowledge, is progressive, both in the way of correcting mistakes and of receiving knowledge of new reality. And the theologian has no reason to fear the progress of natural science; for truth in one department of knowledge can never conflict with truth in another.

At the same time the theologian should be in no haste to modify his theology in order to adjust it to new scientific discoveries and theories. For man's knowledge of natural science is also progressive. Every generation corrects the mistakes and enlarges the knowledge of its predecessors in every department of physical science. What is accepted as science to-day may be rejected in the future. When, a few years ago, geology recognized the theory of catastrophes, if a theologian had attempted to reconcile his interpretation of the first chapter of *Genesis* with geology, his reconciliation would have been of little worth since *Lyell's* theory of uniformitarianism has been accepted. Already we have geologists who are suggesting the necessity of at least combining catastrophism with uniformitarianism in order to take up all geological facts. It is idle, therefore, to be continually trembling lest theology cannot be harmonized with every shifting phase of physical science.

The harmony is as likely to be attained by correcting an error or by an advance of knowledge in natural science as in theology. We should do our work as theologians, trying to make men wiser and better by the knowledge of God, of his law and his love, calm in the confidence that the legitimate tendency and ultimate issue of the progress of knowledge in every department will be to confirm, clarify and enlarge our knowledge of God.

V. Theologians and others who have not themselves made scientific investigations, must receive facts on the authority of scientific investigators, but are competent to reason on the facts and to judge of the generalizations, inferences and theories of scientists respecting them. When one who is not a professional scientist ventures to criticize a scientific generalization, or inference, or hypothesis, or theory, it is very common and also very easy to dismiss it with the sneer that the man is not a scientist, and therefore is incompetent to discuss the subject. Here is a confounding of widely different things. One who has not himself made scientific investigation as to a fact, must receive the fact on the authority of the scientist who has observed it. One who is not a chemist must accept on the authority of chemists facts which they have observed in their laboratories. One who is not an astronomer must accept the facts which astronomers observe with their instruments. But when the scientist proceeds to announce his own generalization of these facts, his inferences from them, the hypotheses and theories which he constructs respecting them, any well-educated person is competent to judge of the correctness of his processes and his conclusions; or to take the facts and generalize them or reason from them for himself. This distinction is recognized by Prof. Tyndall: "To judge of the soundness of scientific data and to reason from data assumed to be sound are two totally different things." H. Spencer, in a review of Prof. Owen's theory of the vertebrate skeleton, recognizes the same distinction: "We confess that nearly all we know of this department of biology has been learned from his lectures and writings. We pretend to no independent investigations, but merely to such knowledge of phenomena as he has furnished us with. . . . Had Prof. Owen simply enunciated his generalizations" (I should substitute *facts* for *generalizations*), "we should have accepted them on his authority. But he has brought forward evidence to prove them. By so doing he has tacitly appealed to the judgment of his readers and hearers—has practically said, 'Here are the facts; do they not warrant these conclusions?' And all we propose to do is to consider whether the conclusions are warranted by the facts brought forward." This is reasonable. The claim of some loud-mouthed scientists that none but professional scientists are competent to judge of their reasonings and conclusions is

contrary to common sense, and is an attempt to suppress free thought by dogmatic authority.

It must be added that theologians and other educated persons, who are not professional students of natural science, are better qualified in some respects to judge of the correctness of reasoning from scientific facts than the professional students of nature themselves. However important to all students the discipline of empirical methods may be, equally important to the empirical student is instruction in logic and the laws of thought and the discipline accordant therewith, the lack of which is often so noticeable in the reasoning of scientists in support of their theories. Haeckel pungently rebukes this defect, and himself strikingly exemplifies it. Also, scientists are at a disadvantage in the extreme specialism which is necessary from the minute subdivision of modern sciences. This is especially apparent when their reasonings pertain to the unity of large generalizations from many sciences. One whose life has been spent in investigating the minute details of a single corner of a great science must be less competent for the broadest generalizations of human thought than a theologian whose life is spent in studying the most comprehensive generalizations and laws of nature and of man, and in contemplating all particular facts, and all scientific generalizations and laws in the unity of an all-comprehending system of reason.

The charge of narrowness and bigotry against theologians has been sufficiently frequent and bitter. And it is true that they have not escaped the influences inseparable from every special pursuit. The theologian may get lost in the mustiness of the past and mistake the exploring of libraries for the investigation of truth; he may need Faust's admonition to his scholar: "Is parchment the holy well a drink from which allays thy thirst forever? Thou hast not gained the cordial if it gushes not from thy own soul." But devotion to science exposes to a like danger. Minerals and plants, chemical and mechanical forces, may be as dry as the driest parchment and as powerless for true culture. John Stuart Mill says: "This lowering effect of the extreme division of labor tells most of all on those who are set up as the lights and teachers of the rest. A man's mind is as fatally narrowed and his feelings towards the great ends of humanity as miserably stunted by giving all his thoughts to the classification of a few insects or the resolution of a few equations, as to sharpening the points or putting on the heads of pins. The 'dispersive specialty' of the present race of scientific men, who, unlike their predecessors, have a positive aversion to enlarged views, and seldom either know or care for any of the interests of mankind beyond the narrow limits of their pursuits, is dwelt on by Comte as one of the great and growing evils of the time, and the one which most retards moral and spiritual regeneration. To

contend against it is one of the main purposes towards which he thinks the forces of society should be directed."

VI. It is legitimate for theologians to controvert atheism and agnosticism when promulgated as natural science or as necessarily implied in or inferred from it; and they are falsely and unjustly stigmatized as opposing natural science in so doing.

1. Because in promulgating atheism, agnosticism or irreligion the student of natural science passes beyond the sphere of empirical science and begins to dogmatize in the sphere of metaphysics and theology. Empirical science within its own sphere and by its own methods is entirely incompetent to attain the idea of God or to declare his existence. It is equally incompetent to deny his existence or the possibility of knowing that he exists. Each of these denials assumes the validity of metaphysical and theological methods and the reality of metaphysical and theological knowledge, and announces a negative answer to the most profound questions of metaphysics and theology. If man has no faculty of metaphysical and theological knowledge, it is as impossible for him to ascertain and declare that there is no God as to ascertain and declare that there is one; as impossible for him to be conscious that he is ignorant of God and to ascertain and declare his incompetence to know him, as for a pig to be conscious of his ignorance of the Calculus or of Logarithms and to ascertain and declare his incompetence to know them. In affirming atheism or agnosticism, the student of nature has left the sphere of empirical science; in controverting his atheism or agnosticism, the theologian is controverting his false theology and metaphysics, not his empirical science. Prof. J. Lawrence Smith, in his address as President of the American Scientific Association at the session in Portland, said: "It is a very common attempt nowadays for scientists to transcend the limits of their legitimate studies and run into speculations the most unphilosophical and absurd; quitting the true basis of inductive philosophy and building up the most curious theories on little else than assertion; speculating upon the merest analogy; striving to work out speculative results by the inductive method. This is a perversion of Bacon's philosophy; and we cannot wonder that one adopting such views, whatever his claim to genius may be, soon cuts loose from all physical reasoning and becomes involved in the most transcendental and absurd opinions." Of this the famous Prof. Lorenzo Oken, of Zurich, was a remarkable example.

2. Those students of natural science who thus transcend the limits of empirical science and dogmatize in the sphere of theology and metaphysics, reveal a dangerous tendency to establish a scientific priesthood, which shall authoritatively prescribe to men their religious and philosophical opinions.

They are accustomed to have men accept on their authority the facts which they have scientifically ascertained; they unconsciously come to regard themselves as equal authorities in whatever inferences they may draw from the facts. And as popular lecturers and writers for popular magazines, they gradually assume more and more of the priestly function and propound their own opinions as scientific facts. On the other hand, the people are accustomed to regard them as authorities as to facts in their specific departments of science, and failing to discriminate between facts and opinions, come to accept their metaphysical and theological speculations and their imaginative theories as indisputable scientific facts. To this tendency, exemplified in favor of theology, Prof. Tyndall alludes in his Belfast address: "When the human mind has achieved greatness and given evidence of extraordinary power in any domain, there is a tendency to credit it with similar power in all other domains. Thus theologians have found comfort and assurance in the thought that Newton dealt with the question of revelation, forgetful of the fact that the very devotion of his powers, through all the best years of his life, to a totally different class of ideas . . . tended to render him less instead of more competent to deal with theological and historic questions." Prof. Tyndall's own notorious errors in his notices of the history of philosophy in this very address exemplify this remark, and doubtless by many readers are received as scientifically accurate on the authority of a popularly known scientist.

Thus, both on the part of a considerable number of scientists, especially of those who spend a large part of their strength in popularizing science, and on the part of the people, the tendency to establish and recognize a hierarchy of scientists, authoritatively dogmatizing as to what men must believe and disbelieve, is gaining strength.

It has even had explicit avowal. Comte, in his positive politics, called in a well-known witticism Roman Catholicism with the religion left out, provides in his imaginary political State a hierarchy of *savans*, who are to declare what is scientifically true, and enforce its acceptance by punishment of all who reject it. Renan speculates whether "the future will not bring back something analogous to the ecclesiastical discipline which modern liberalism has so jealously suppressed."* Mr. Lewes gives us the dictum: "Whatever is inaccessible to reason, should be strictly interdicted by reason;" respecting which the Duke of Argyll remarks: "Here we have the true ring of the old sacerdotal interdicts. Who is to define beforehand what is or what is not inaccessible to reason?" A writer in the Westminster Review (October, 1873, p. 398), speaking of the modern man of science, says: "Above all things he is

* St. Paul, p. 392.

silent in the presence of truths (or falsehoods) which he has ascertained to be beyond *his* reach; and he *commands* equally in respect to these silence on all others of mankind." Prof. Huxley says in the Fortnightly Review (November, 1871, pp. 532, 538): "I do not see how any limit whatever can be laid down as to the extent to which, under some circumstances, the action of government may be rightfully carried. . . . Are we not bound to admit with Locke that the State may have right to interfere with popery and atheism, if it be really true that the practical consequences of such belief can be proved to be injurious to civil government?" And why not, then, equally a right to interfere with theism and Christianity, if an atheistic government believes them effete and a hindrance to the progress of society? The demand of Prof. Haeckel that an atheistic doctrine of evolution should be required by the government to be taught in all German schools, and the reply of Virchow opposing the demand, show how close at hand and how practical this question is. The Spectator is among the most liberal of English newspapers. It recently said: "Physical investigation has often been arrogant and ignorant in its attacks on theology. . . . At all events, in the present day and among intellectually cultivated people, it takes, we think, more courage to make a stand against the presumptuous modesty of the philosophy of nescience than against the narrow bigotry of theological restriction." Now and then some scientist proclaims with considerable heat the right of students of physical science to investigate all questions. Certainly, in common with all men, they have the undisputed right to investigate all questions and to publish their conclusions. The objection is to their proclaiming their philosophical and theological speculations and negations and their unverified hypotheses as established facts and laws of empirical science, to be received implicitly on their authority by all who are not specialists in physical science.

3. Atheism and agnosticism have practical bearings adverse to the virtue and well-being of man, and there is a legitimate moral interest in opposition to them. An insidious error is industriously propagated under the misnomer of love of truth, which requires us to suppress all our moral intuitions and sentiments and to regard with indifference all theories which ask a hearing, being always equally willing to receive one as another, whatever be its moral tendencies. It is an error as unphilosophical and unscientific as it is immoral. The moral aspect of a doctrine is an important element of evidence in judging of its truth; its immoral tendency is a legitimate reason for rejecting and opposing it. Moral indignation is the legitimate and healthy spirit in which to meet doctrines hostile to good morals.

4. The opposition of theologians in this case is not opposition to

natural science, but to atheism, agnosticism and immorality. There is no conflict between science and theology; but theology is in controversy with atheism even when it masks itself in the disguise of science. And it is not the theologian, but the atheistic scientist, who is responsible for the conflict. It is not theology assailing science, but it is scientists teaching atheism who assail theology. The common form of expression is the *opposition of theology to science*; as if theology were the aggressor. The truth of history is just the contrary; scientists assail theology by teaching atheism or agnosticism as science. Theology controverts the atheism and the agnosticism. It has no conflict with natural science.

VII. There is no extraordinary reason at the present time to apprehend the overthrow of Christianity by the assaults of skepticism. Matthew Arnold may perhaps be selected as the one who more than any other has given voice to the fear by which many are well nigh paralyzed. At the Grande Chartreuse, pondering on its past glories and on the faith of its cowed monks still lingering within its walls, he says:

“Wandering between two worlds, one dead,
The other powerless to be born,
With nowhere yet to rest my head,
Like these on earth I wait forlorn.
Their faith, my tears the world deride;
I come to shed them at their side.

“But if you cannot give us ease,
Last of the race of them who grieve,
Here leave us to die out with these
Last of the people who believe!
Silent while years engrave the brow:
Silent;—the best are silent now.

“Achilles ponders in his tent;
The kings of modern thought are dumb;
Silent they are, though not content,
And wait to see the future come.
They have the grief men had of yore,
But they contend and cry no more.”

1. In reply to this spirit of despair I say, first, that in every period of the history of Christianity, from the beginning until now, despair of its progress and even of its perpetuity would be the just conclusion from a comparison merely of the human forces working for and against it, irrespective of the gracious energy of God working in it and for it. Whoever studies the story of the struggle of Christianity during its first three hundred years with heathenism backed by the intellectual and physical forces of the Roman empire, and its ultimate triumph, must see that through the entire period the comparison of the human forces

in the conflict could justify only the expectation that Christianity would be overpowered and extinguished. The same is true of any period of the Dark Ages. The same is true of the Protestant Reformation. The progress of Christianity is a perpetual surprisal. So our Lord declared: "He will show him greater works than these that ye may marvel." Its perpetuation and progress through the ages has been a perpetual attestation of the presence and power of God. We have as much reason to expect its perpetuation and power now as ever in the past. Christianity consists essentially of the presence and energy of God working in human history to deliver men from sin and to establish the reign of righteousness and of good-will. Despair of its progress rests on disbelief of that gracious presence and energy.

2. Skepticism is not more prevalent and powerful than in some former periods. Even in ancient Greece we discover similar fears of atheism. Plato says: "It is commonly thought that they who addict themselves to astronomy and similar studies are made atheists by it—they seeing as much as possible how things come to pass by physical necessity, and therefore thinking them not to be ordered by reason and will for the sake of good."* I will mention but one example in Christian times: the decline of religion in Great Britain and America in the last century. Bishop Butler, in the "Advertisement" which he prefixed to the "Analogy," says: "It has come, I know not how, to be taken for granted by many persons that Christianity is not so much as a subject of inquiry; but that it is now at length discovered to be fictitious. And accordingly they treat it as if, in the present age, this were an agreed point among all people of discernment, and nothing remained but to set it up as a principal subject of mirth and ridicule. . . . On the contrary, thus much at least will be here found, not taken for granted, but proved, that any reasonable man, who will thoroughly consider the matter, may be as much assured as he is of his own being, that it is not, however, so clear a case that there is nothing in it." This growing disbelief is also a theme in his Charge to the Clergy. Another witness in respect to the same period is President Edwards, who says: "History gives no account of any age wherein there was so great an infidel apostasy of those who had been brought up under the light of the gospel; never was there such a disavowal of all revealed religion."† He is speaking both of Great Britain and America. And yet the period following these testimonies of Butler and Edwards, so much like the despairing remarks of the present day, was in both countries one of remarkable and widespread revival of the Christian faith and life. One who studies the history of Christianity in its wholeness and notes the

* Laws, B. XII., 967.

† History of Redemption, Period III., Part V.

recurring epochs of infidel assaults upon it, instead of despairing of its progress, will rather admire the sublimity with which Christianity holds on its way, like the sun emerging undimmed from the earthly mists which temporarily obscure it. If we are living in an epoch of skepticism, such epochs have occurred before and are always transient.

3. The recurrence of epochs of skepticism is incidental to the progress of Christianity. This is evident so soon as we rightly understand the true idea, aim and methods of Christianity, and the facts pertaining to humanity which condition its progress.

Its effects are not consummated by resistless almightiness, but by God's gracious influence on men free to consent or to resist—influences of wisdom and love to enlighten them in the knowledge of the truth and to draw them by their own willing consent to conform their character and lives to it. Hence Christianity presents itself anew for acceptance or rejection to every generation and to every man. Hence the conflict which marked the introduction of Christianity is renewed in every age. In the nature of the case Christianity cannot become a consummated effect, fixed unchangeably for all time. In its very nature it is the offer of God's grace which every man in every generation must receive or reject; it is the presence in human history of the divine influences of truth and love to which every man in every generation must consent or refuse to conform his life. The conflict of divine wisdom and love against human ignorance, error and sin must continue so long as man remains a rational free agent, the subject of ignorance, error and sin, and so long as God remains the perfect Reason, the perfect Wisdom and Love energizing in human history to redeem men from error and sin and bring them into harmony with his own wisdom and love. Hence the significance of the scriptural expression that the Spirit of God "abides" among men, "striving" through all the courses of human history to accomplish for men the wise and benignant ends of his redeeming love.

A similar conclusion is necessary if we consider the progress of man in the knowledge of nature, in industrial inventions, in political institutions, in the adjustment of the various relations of men in society. So far as progress involves the abandonment of error and the correction of mistakes, it presupposes skepticism in its better meaning. New knowledge in any department of life makes it necessary to inquire how that new knowledge and the modification of the conduct of life in harmony with it are to be adjusted to the unchanging truth and grace of God, and to the reign of the perfect reason and its perfect wisdom and love. Skepticism in its better sense marks, not merely a transient, but also a transitional state to a larger and wiser knowledge of the truth. And it is not strange that, in such a period, many drop into the baser

skepticism, into the abyss which Carlyle calls the Everlasting No, and deny altogether the reign of Reason, the supremacy and continuous presence and energy of absolute wisdom and love in the conduct of the universe.

That the present epoch of skepticism is transitional to a larger, purer and more efficient faith I cannot doubt. Precisely what the change will be cannot yet be accurately foreseen. "We wait to see the future come," not in fear or despair, but in faith in Christianity as the religion of promise, always throwing forward into the coming time the great light of the Messianic promise, as old as Abraham, as divine as the living Christ, as continuous as the presence of God's Spirit, that the future shall be better than the past. But so much as this seems already assured that human thought can never go back to the Deistic conception of God as a mechanician, which carried to its logical results gives us the Epicurean divinity, shut out from all action in the universe; nor to the conception of Duns Scotus, which has vitiated theology so extensively, that God is supreme will or arbitrary power instead of being supreme Reason energizing everywhere; nor to the attempt to carry theological speculations to the remotest and minutest ramifications of possible inference and to set down precise answers to every conceivable question. And we confidently expect that theology will turn more and more to the living Christ and inspire that love to man and practical endeavor for human welfare which characterized the earthly life of Christ, are set forth for the teaching of all nations in the incarnation, and declared by him to be, at the final judgment, the test of character of those to whom his gospel may come: "Inasmuch as ye have done it, or done it not, to one of the least of these my brethren, ye have done it, or done it not, unto me."

Our Saviour himself teaches, not only that his kingdom grows, but that it grows by epochs: "first the blade, then the ear, after that the full corn in the ear." These are epochs in the growth of the grain; not that it grows only in these epochs, but that its continuous growth naturally manifests itself in them. And our Lord teaches that the growth of his kingdom is accordant with the same law of growth.

4. It should also be noticed that Christian progress is a vital growth, destructive only of the erroneous or effete, retentive of the truth. The true ideas of Hebrew, Greek and Roman thought are still forces in Christian civilization; and so Christian truth must live and work in the progress of man forever.

5. The common representations of the decay of Christian faith at the present day are greatly exaggerated. Carlyle describes the age as "destitute of faith and yet afraid of skepticism." The fact that the age recoils with a shudder from the plunge into atheism, which it sees

would be indeed, "shooting Niagara," is rather an evidence of faith. Contrast the eagerness with which the French Revolutionists plunged into Atheism and gloried in it. And it is far from being true that this age is destitute of faith. I cannot here investigate the question. But judging from the growth of the churches, compared with that of the population, the activity of the churches in propagating Christianity at home and abroad, the multiplicity of beneficent enterprizes, the energy with which they are carried forwards, and the great sums of money given to aid them, the amount of thought, reading and discussion of religious subjects, the publication of sermons in newspapers and otherwise, the fact that the age is mainly occupied with questions of Christian civilization, such as the political rights of man, the emancipation and subsequent education of serfs and slaves, the condition of the laboring classes, and the like social questions, the suppression of drunkenness and other moral questions, I think it safe to say that Christianity was never more widely, powerfully and beneficently efficient in the world than it is to-day.

If religion has dropped from its outward manifestation something of its sanctimoniousness, if its speech is no longer in the cant which used sometimes to be called "the language of Canaan," if it turns a less forbidding front to the joyousness of youth and is less in the habit of identifying amusement with worldliness, it may not on that account be less imbued with the self-sacrificing love which spends and is spent in the service of man or with the courageous and overcoming faith which waits always on God for inspiration, guidance and strength. So that we may be beginning to realize in the present what Matthew Arnold sadly sighed for as a bare possibility of the future:

"Years hence perhaps may dawn an age
More fortunate, alas, than we,
Which without hardness may be sage,
And gay without frivolity."

CHAPTER XIV.

THE SENSIBILITIES: THE CONSTITUTION OF MAN AS SUSCEPTIBLE OF MOTIVES AND EMOTIONS.

§ 62. Definition and Classification.

THUS far I have been examining the intellectual constitution of man. As the result of these investigations we have reached the conclusion that man is capable of empirical, rationalistic or noetic, and theological science; that these are grades of knowledge necessary in attaining knowledge of all that may be known of anything; that they are reciprocally dependent and necessarily in harmony; that in theology all science finds its completeness, its unity and its consummation; and that the denial of the reality of theological knowledge involves the denial of the reality of all knowledge. I proceed now to consider the constitution of man as susceptible of motives and emotions, that is, the Feelings or Sensibilities.

I. The Sensibility is man's constitutional capacity of motives and emotions. The motives and emotions themselves are called Sensibilities or Feelings. The feelings which are impulses to action are called motives. The emotions are simple joy or sorrow, pleasure or pain, which do not impel to action. If I may use a figure derived from mechanics, motives are dynamic, moving the man to action; emotions are static conditions in which the man simply enjoys or sorrows, feels pleasure or pain. For example, hunger, which is the appetite for food, is a motive to get food and eat it; the pleasure of eating it and of the satisfaction of the appetite is an emotion. The same distinction pertains to all the sensibilities.

II. The sensibilities are of two classes, the Natural or Psychological, and the Rational.

The Rational Sensibilities presuppose the exercise of the Intuitive Reason. They pertain to the fundamental realities or ideas of Reason: Truth, Right or Law, Ideal Perfection, the Good estimated by reason as of true worth, and the Absolute Being or God. Motives and emotions of this class are impossible in a being not endowed with the intuitive Reason.

The Natural or Psychological Sensibilities do not imply the exercise of in-

tuitive reason, but are possible to irrational sentient beings. They are common to man and the brutes. All of them may probably be found in the higher orders of brutes.

Both classes of sensibilities are constitutional in man, and arise spontaneously and involuntarily when the appropriate object and occasion are present.

III. Among the natural sensibilities are the following:

I. The instincts, or impulses without intelligence to do what intelligence, if it existed, would require. Such is the impulse of a new-born lamb or babe to suck; or of a young fish-hawk striking a fish, doing what to intelligence would require the calculation of distance, of refraction of light, and of the motion of the hawk and the fish.

2. The impulse to exertion with no object ulterior to the exertion of the faculties and the counter impulse to rest. The impulse to exertion impels children to skip and jump, and to constant intellectual activity. It is the impulse to play. Play is exertion of the faculties with no end ulterior to the exertion itself; and the exertion gives pleasure because it is the satisfaction of a natural impulse. Work, on the contrary, is the exertion of the faculties for some end ulterior to the exertion, whether the exertion itself is agreeable or not. Riddles, puzzles, conundrums, chess, and similar games of skill are intellectual play.

This is sometimes called the Radical impulse. It is this in our constitution which makes constant employment necessary, and afflicts us with ennui when we have nothing to do. It is this which makes men dissatisfied with positions in which they cannot put all their faculties into exercise and find full scope for all their energies. It is this which prevents men from stopping business when they have accumulated wealth, and impels them to new enterprises and new risks. When this impulse is weak in a young man, we say he has no ambition, no enterprise. Much that is commonly ascribed to covetousness, or selfish ambition, or other sinister motives, may often be more truly ascribed to this radical impulse. It becomes complicated with other motives, but it always remains one of the deepest and most constant springs of human action.

3. Appetite and desires: as hunger and thirst, the desire of society, of power, of esteem, of property, of knowledge. A desire always implies uneasiness in a sense of want, and an impulse to exertion to get the object desired. Joy in getting the object and sorrow in missing it, are consequent on the desire of the object and would be impossible without it.

4. Natural affection; altruistic natural sensibilities, terminating on another and not on self. Desire is a sense of want impelling the person to get something for himself; affection is a sense of fullness impelling him to impart something to another.

Natural affections are of two kinds: affections of affinity or sym-

thetic affections, as parental, filial and conjugal love, compassion for the distressed, love of country, and the like; affections of antipathy or repellent affections, as anger, revenge, fear, and antipathies of race.

All these are common to man and the higher orders of brutes.

IV. The Rational motives and emotions are the five following:

The Scientific, pertaining to the truth;

The Moral, pertaining to the Right;

The Æsthetic, pertaining to the ideally perfect;

The Teleological, pertaining to the Good which reason adjudges to be worthy of the pursuit and enjoyment of rational beings;

The Religious, pertaining to Absolute being or God.

These have been noticed sufficiently for my purpose in discussing the fundamental ideas of Reason.

§ 63. The Desire of Happiness as a Motive.

According to this analysis, happiness or enjoyment is a static condition and is not a motive to action. When a man is happy, his happiness does not of itself move him to seek something else; on the contrary, he is disposed to rest in his happiness. We have seen, however, that the desire of happiness may be a motive to action; when a man abstracts enjoyment from its sources, conditions and consequences, and compares simply enjoyment and suffering, he naturally desires the former rather than the latter. This motive, however, involving such a process of abstraction, cannot be a frequent motive of human action. The common motives are the instincts, desires and affections, the physical and rational impulses which terminate on specific objects. We see, then, from a new point of view how exceedingly far from truth is the assertion, already disproved, that the desire of happiness is the ultimate motive of all moral action.

We may also notice here an important fact that so far as the desire of enjoyment does supplant other motives and become the ruling motive of action, it becomes morbid and hurtful. And this the whole history of the world verifies. This is the very characteristic of a period of luxury and effeminacy; people make the most diligent study of ways to enjoy themselves. They live for that end. And while debasing themselves, they miss the enjoyment. Apicius could not sleep because the rose-leaves lay too thickly on him. From the same source come the selfishness and sensitiveness of excessive refinement and delicacy. So in æsthetics, when persons begin to seek enjoyment, they cease to admire the beauty and miss the enjoyment. One who walks abroad scene-hunting, does not find nor enjoy the beauty of nature; and great galleries are a weariness to him who is seeking enjoyment instead of sincerely admiring beauty.

When enjoyment, which is legitimately the consequent of following some motive, itself supplants the motive, it becomes a morbid and dangerous desire of excitement. For example, one has an appetite for food and he enjoys eating. Suppose now that his mind fixes on the pleasure of eating and he desires that, instead of desiring food; then he becomes an epicure, a gourmand; he devises ways to increase and prolong the pleasure of eating, even to the disgusting device of the Romans—*vomere post coenam*. And thus he spoils his enjoyment. Similar is the result of the use of alcoholic drinks. The drinker ceases to enjoy the drink; he seeks the excitement. Similar is the mental intoxication of excessive novel-reading. Similar is the result in the religious life, when one no longer seeks God and lives to serve men, but seeks the exhilaration of religious enjoyment. And the result, in all these most diverse and yet similar cases, is to deaden the sensibilities, to benumb the capacity of enjoyment and to create a necessity for more highly-spiced condiments, for more sensational stories—and sermons—and to destroy the susceptibility to the joys of common life.

§ 64. Feeling a Source of Knowledge.

The feelings are a source of knowledge in the following particulars:

Feeling is always conscious feeling. A pain or pleasure of which the person is unconscious would not be a pain or pleasure; it would not be a feeling. In this sense feeling is a kind of knowing.

Man has knowledge of objects through feeling. In sensation man perceives the outward object; in sorrow man is conscious of himself as sorrowing. So when God's Spirit works in the human spirit, in the spiritual motives and emotions man may know God; and thus that may be "spiritually discerned" which is "foolishness" to "the natural man."

Feelings may be a source of knowledge by our inferring their cause or object. An instinct indicates a corresponding reality. A young bird's instinct to fly indicates the possibility of flying; a rabbit's instinctive timidity indicates the reality of danger; a sinner's spontaneous fear of judgment indicates the reality of moral law and government.

They are also motives interesting us in seeking knowledge. And on the feelings, candor and impartiality in the investigation of facts and truth depend.

CHAPTER XV.

THE WILL.

§ 65. Definition.

I. THE will is the power of a person, in the light of reason and with susceptibility to the influence of rational motives, to determine the ends or objects to which he will direct his energy, and the exertion of his energy with reference to the determined end or object.

II. The will is a person's power of self-determination. It is his power of determining the exercise of his own causal efficiency or energy. He can determine the object or end to which he will direct it; he can exert it or call it into action when he will; he can refrain from exerting it when he will. He has power of self-direction, self-exertion and self-restraint. This power is the will. Its function is to determine the exercise of power. Its acts are determinations. We call it the power of self-determination.

1. The determinations of the will are of two kinds—Choice and Volition.

In *choice* a person determines the object or end to which he will direct his energies.

In *volition* a person exerts his energies or calls them into action; or he refuses to do so. Volition is a determination because a person exerts his energies or refrains from exerting them at will. He determines whether to exert them or not. The motor force of a stone, on the contrary, is not *exerted* by the stone, but is communicated to it.

Choice is self-direction. Volition is self-exertion or self-restraint. Both are self-determinations.

2. The will must be distinguished from the causal efficiency or power whose action the will determines. Every determination of will presupposes that the person is constitutionally endowed with causal efficiency or potency. The existence of power or efficiency is essential to the very conception of a will. If there is no power to be exerted and directed, there can be no will to exert and direct it. But causal efficiency is not a distinctive peculiarity of will. Material objects have causal efficiency. They, however, cannot direct it, nor exert or refrain from exerting it of themselves. Electricity is a power. But it cannot

determine the direction nor the exertion of its energy. The lightning cannot select the tree which it will strike nor determine when it will exert its energy and strike it. The distinctive peculiarity of will is that it is a power capable of choosing the end or object to which it will direct its energy and of exerting or refraining to exert its energy. Man constitutionally has intellectual power; he knows and thinks. His will does not create this power of knowing and thinking; it simply chooses the object of thought and exerts the intellectual power upon it in fixed attention. Man by his constitution has physical power. His will does not create this physical power; it simply selects its object and exerts the power in the direction determined. Both the intellectual and the physical powers are trained and developed under this exercise. But the will does not create this constitutional capacity of growth; it merely exerts and directs the powers so that the growth is realized.

While, then, the will presupposes power or causal efficiency, it is not merely that. The power becomes will only when of itself it can determine the end for which it will act, and can exert its energies or refrain from exerting them for the chosen end.

3. The determinations of the will are distinguished from the sensibilities. They are neither motives nor emotions; they are distinct from all instincts, desires, affections, from all the optative part of human nature, from all the sensibilities, whether natural or rational. Hunger is a motive to seek food and eat. But hunger is not the choice of fish instead of meat for dinner, nor is it the determination to go fishing in order to get it.

Man is the subject of many motives impelling him to many and often incompatible objects or ends of action. Impelled by these motives, man by his will determines among all these objects one to which he will direct his action. The choice of the will stands forth entirely distinct from the motives and the emotions, and determines the action. If the man's end and course of action are determined by his feelings, he has no free-will. He simply follows, as a brute, the impulse of nature which at the moment is strongest.

4. The determinations of the will must be distinguished from the determinations and conclusions of the intellect. A determination by the intellect is simply a definition. It is noting in thought the limits or boundaries of anything, as its form and position in space, or its date and duration in time; or it is noting the qualities of a particular concrete reality, or the contents of a logical concept or general notion. Less properly the comparison of objects concluding in a judgment is called an intellectual determination; as one compares different courses of action and judges one of them to be the right one, or the expedient,

or the agreeable ; or he compares different objects and judges one to be the most beautiful or the most desirable.

This, however, is a determination merely of the thought, not of the efficient energies ; it concludes merely in a judgment, not in a choice or a volition. A man may be intellectually convinced that one of several courses of action is right, and yet determine to take the contrary ; he may be intellectually convinced that a certain character is perfect, or that the possession of a certain object would be agreeable, and yet not choose the character or object as the end to be attained by action. In the determinations of the will is something other than the determinations of the intellect. The will determines not thought, but the efficient energies. In its choice of an object it directs the energies upon the chosen object as the end of action ; in its volition it exerts them or calls them into action ; it controls them whether in action or at rest, whether potencies or energies.

III. Power is constituted will by being endowed with Reason. A rational power is a will. Because man is rational he is able to compare all ends and methods and motives of action and determine among them the motive which he will follow, the ends for which he will act, and when, where and how he will exert his energies for the end chosen. A Power endowed with Reason is self-directive in choice and self-exertive in volition ; in both it is self-determining.

Will is the name of the mind itself considered as self-determining ; just as Reason is the mind itself considered as rational. The names designate two aspects or powers of the person, yet but one indivisible person. If you regard the person as Will, he is a rational Will. If you regard him as Reason, he is an energizing and self-determining Reason ; or, as Kant says, "The Will is nothing other than the Practical Reason."

That rationality is of the essence of will, that power is constituted will by rationality, is a fact of fundamental importance, and is a clew that guides us through the maze of controversy on the subject. Had this fact been appreciated, the confusion of tongues in discussing the freedom of the will might not have been inflicted on us. Prof. Henry P. Tappan, for example, and others define the will as mere power, and thus, while advocating free-will, identify it with a necessary force of nature.

§ 66. Choice and Volition.

I. The distinction of choice and volition is a real one. It is not, however, commonly formulated in the discussion of the will, and the names *choice* and *volition* are not commonly recognized as designating two kinds of determination, the determination of the object or end of the action, and of the exertion of the powers in action for the end

chosen. I regard the distinction as indispensable to a clear and thorough knowledge of the will and of moral responsibility.

1. It is clearly recognized in consciousness.

If we reflect on our own determinations, it is plain that we are not limited to determining to exert or not to exert our energies, but that we also determine the object for which we exert them. It is also plain, on the other hand, that the power of determination is not limited to choosing the object of action; for man is conscious that he exerts his energies and arrests their exertion by his own volition. Man is conscious of will-power that is both self-directing and self-exerting. For example, a man is invited to go to a picnic. He chooses between the value represented by the day's wages and the saving of the expense of the picnic, on the one hand, and the pleasure of the excursion. Having chosen the day's wages, he sets himself to work and saws wood all day to earn it. He is conscious of the distinction between his choice of the wages and his volitions exerting his strength in earning it. A young man chooses between learning, wealth and political preferment as the object of his life-work. This choice is obviously different from the volitions to exert his powers day after day and year after year in striving to win his chosen object.

2. The distinction is essential to the reality of free-will and moral responsibility. If will is merely the volitional power of calling the energies into action, then we no longer determine by free-will the ends or objects of action; and these are determined by the constitutional impulses or motives which at the time are strongest. And thus all freedom both of choice and volition disappears, since the man has no power of self-direction and can exert his energies only in the direction already determined for him by the unreasoning impulses of nature. Hence Socrates, in the *Gorgias*, calls attention to the fact that men do not merely will their action, but rather the object for which they act.

II. Choice may be further explained as follows:

1. The object or end determined by choice is always that to which the energies are to be devoted in action. It is never a mere preference of taste or feeling without reference to action; as one relishes peaches more than apples, or prefers Homer to Virgil as a matter of taste. It is always a determination of the object of action; as one chooses peaches in preference to other fruit for a dessert and goes and buys them; or chooses Homer for his evening's recreation and takes it down and reads it. And this nullifies Prof. Calderwood's criticism of Edwards on this point: "Will is a power of control over the faculties and capacities of our nature, by means of which we are enabled to determine personal activity. It is to be carefully observed that will is control of our own powers, not of external things. Edwards has quite overlooked this in

his definition, 'Will is that which chooses anything.' This he says must be corrected; it is "choosing forms of activity or action, not things."* The truth is, on the contrary, that it is choosing the *objects* of action, not its forms merely; but the object is chosen only as an object of action. It is a singular error to suppose that choice of an object implies an act of control over "external things." It is simply the choice of the object of action; it determines the end or object for which we will exert our powers. Hence the choice of the object is in itself the determination of the direction of our activity.

2. The act of choosing is as follows:

First, it presupposes in the intellect a comparison of objects in the light of reason and with susceptibility to the influence of rational motives. In a rational being the rational sensibilities stand always over against the natural instincts, desires and affections; and these open to man two spheres of activity with their respective and contrasted objects between which he can choose. A choice presupposes a comparison of objects in the light of reason. The actual choice in a given case may be between objects of the natural appetites, desires or affections; as between two different articles of food. But even in this case choice in the proper sense of the term is possible only because the man is endowed with reason, and thus is able to compare objects in the light of reason and under the influence of rational motives, and then to determine which shall be the object of his action. Otherwise he would simply be driven by the strongest impulse without the possibility of a choice. If he chooses that for which he has the keenest relish, the choice is still a free determination of the will and not a helpless following of appetite.

Secondly, after the comparison follows the choice, which is the simple, indefinable determination of the will. Before the man, in the clear light of reason, lie all the objects which he has been comparing and all the motives, rational or natural, which impel him to these various objects. Wide is his range of choice. He may choose that which reason approves and to which rational motives impel, and be in character like God; or, disregarding reason, he may choose that to which sensuous appetite impels, and be as a brute; or that to which malignity and hate impel, and be as a devil. He can choose, among all these objects, one as the object of action; can determine which of the conflicting motives he will follow. And this is a determination by his will, directing his energies to an object or end. The choice is a simple indefinable determination, known only by the consciousness of it in experience.

* Manual of Moral Philosophy, pp. 165, 178.

Mr. Hazard and Professor Bowen* deny that there is a determination of the will here, and recognize only the intellectual acts of comparing and judging. Mr. Bowen says, totally misconceiving the whole action and leaving no place for free determination: "Determination as a phenomenon of choice is a function of the understanding and takes place in view of reasons miscalled motives, though as consciousness attests, not under compulsion by them." But that choice is a determination of will and not merely an intellectual comparison, and that it is a determination between objects to which man is impelled by motive-sensibilities natural or rational, motives which are not mere "reasons" intellectually apprehended, is evident from the notorious fact that a person often chooses his object in accordance with appetite, desire or passion, and in defiance of the mandates of reason and the judgment in which the intellectual comparison concludes, and so chooses what he knows is contrary both to his duty and his welfare.

Thirdly, after the determination, the signs or manifestations of the choice are two: volitions to act in the direction of the choice, and complacency or pleasure in the object preferred, so that the action is in spontaneity and not from constraint or restraint.

3. A choice is an abiding determination of the will. It may abide for an hour or day; it may be a life-long choice or preference. It abides, however, as always a free choice, not as a disposition or affection which is a necessity of nature.

4. Choices may be distinguished by their objects as supreme and subordinate. A subordinate choice is the choice of an object as subordinate to an ulterior end; as when one chooses wealth as an object of pursuit, but chooses it simply as a means of political preferment. The supreme choice is the choice of the supreme end of action, to which all other ends are subordinate and which itself is subordinate to no ulterior end.

Because man is rational he must choose some supreme end; for he recognizes reason as supreme; all his thinking culminates in finding the unity of the manifold, and in the conduct of life reason requires him to bring his whole activity into unity, in harmony with rational truths, laws, ideals and ends, and in consecration to that end which reason sets forth as supreme. The choice of a supreme object of action and the unity of life and character in the subordination of all other objects and of all activity to it, is essential in the moral life of a rational being.

III. A volition, as I have defined it, is an executive or exertive act

* Hazard on Freedom of Mind in Willing: pp. 175, 184, 180, 189, 60. Bowen's History of Philosophy, p. 300.

of will which immediately calls the energies into action : as the volition to lift my hand, to throw a stone, or to examine a plant. An exertive volition is in its nature ictic ; it ceases with the action which it calls forth.

If we attend more closely to our mental acts we perceive that we also make determinations to act which are abiding. They are what we call intentions, purposes, resolutions, and so distinguish them from choices or elective preferences. As determinations to act and not choices of objects, they are of the nature of volitions, and may be called immanent volitions ; volitions would then be distinguished as exertive or executive, and immanent. The man who to-day chooses to-morrow's wages in preference to the pleasure of an excursion, in that very choice determines to work to-morrow and earn the wages. So soon as he has chosen the wages, he says, I am determined to work to-morrow. A choice always manifests itself in a purpose to act in accordance with the choice ; and the action will begin immediately if the man sees that immediate action is required to attain the end. In the case of the laborer, he must wait till to-morrow before he can begin his work. But his determination to work remains. So when a man has chosen his profession, his determination to educate himself for it abides through the years of professional study, and his determination to practice it abides through life. This determination does not of itself strike so deep into the springs of action as a choice ; for it is only a determination to do certain actions, while the choice is the preference or determination of the object of the action. Such a determination or resolution has a proverbial lack of tenacity ; men " resolve, and reresolve, and die the same," because the resolution is only a determination to act. If it is dissociated from the choice which fixes the heart on the object, and if then appetite, desire or passion stirs and tempts to the contrary, the resolution gives way like a cotton thread in a flame. The choice, fixing the heart on the object and making the exertion spontaneous and joyous, has a power to resist and subdue the natural passions.

It may be objected that it is an over-refined analysis to distinguish this abiding determination to act, from the choice. It is true that the choice of the object of action *ipso facto* determines the direction of the action to the object chosen ; and I do not wish to dispute about names. The point of practical importance is, that a determination to act, however abiding, if dissociated from the choice of the object, is not a determination of the will in its full significance. The former without the latter must be superficial and weak. Certainly the choice of God as the supreme object of service must always be distinguished from the various acts of service which I render to him and from my abiding purpose to render them ; the choice of my neighbor as the object of

service equally with myself, must always be distinguishable from my acts of service to him and from my purpose to do those acts.

It has been objected that the distinction implies that the supreme choice of God and the immanent purpose to serve him may exist, while yet the actual service is put off to a future time. This is a misrepresentation. Choice spontaneously manifests itself in accordant volitional action. In all choices the purpose to act accordantly is immediate and continuous; but in a subordinate choice the actual exertion may be put off through lack of fit opportunity. In the supreme choice of God any particular act of service may be put off for the same reason; as a young man purposing to go to China as a missionary puts off his actual going till he gets through college and the professional school. But the actual exertion of all the energies in the service of God never needs be put off for such a reason, because a man is required to serve God in whatever he does. There needs be no delay in breaking off one's sins by righteousness; and if the imagined choice of God does not immediately manifest itself thus, it is proved to be not a real choice of God. I have already shown that a choice is not a mere preference of one thing to another, but it is the choice of an object *to which the activity is to be directed*. It is, therefore, of the essence of choice that it spontaneously expresses itself in an abiding determination to act in accordance with the choice and in accordant actual exertion of energy whenever there is fit opportunity.

IV. A volition is not a complete determination, but is the expression of a choice. The choice of the object of action is the fundamental determination, of which the volition is the manifestation and expression. If man has only volitional power or power to exert his energies and has no power of choosing the ends or objects of his action, then his only freedom is freedom to do as he pleases; but what he pleases is necessarily determined by the unreasoning impulse of feeling which at the time is the strongest. Much of the confusion in the discussion of the will has arisen from the error that a volition to do an action is the deepest and only determination.

It may be asked whether a choice may not be made between two actions or courses of action. Undoubtedly two proposed acts or courses of action may be compared as objects of thought, and one of them may be determined on by the will in preference to the other. But if we consider further we shall see that the determination of the action has been made in choosing an object of action. If I have determined to go to New York for the attainment of a chosen object, as the pleasure of seeing a friend or the money to be gained by transacting a business, I may then determine whether I will go on horseback, or by railroad, or by steamboat. If I choose to go on horseback, it will be for the plea-

sure and health to be gained by it; if by steamboat, it may be for the coolness and pleasure of the sail, or, if in the night, for securing the gains of a day's business; if by rail, for the company of a friend or the saving made by greater expedition. So that the determination to act is still dependent on the choice of an object and is a manifestation or expression of the choice.

§ 67. Ethical Application.

This is not the place for the discussion of ethics; but for the further elucidation of the doctrine of the will I will briefly notice some of its ethical applications.

I. The object of the supreme choice is always a person or persons to be trusted and served, not any thing, quality, power or condition to be acquired, possessed, used and enjoyed.

The objects or ends of action among which choice is possible lie in these two spheres. There are persons to be trusted or served; there are things, qualities, powers and conditions to be acquired, possessed, used and enjoyed.

In the sphere of objects to be acquired, that which ought to be chosen as the ultimate and highest end is well-being, or the good estimated by reason as having true worth; and all things, qualities, powers and conditions, which are the legitimate means or conditions of attaining the true and highest good, are rightly chosen as relative good.

But the object of the supreme choice can never be in the sphere of objects to be acquired, possessed, used and enjoyed. For the further question arises: for whom is the object acquired, for myself or for another? Thus beyond all objects that are acquired and used, there is always and necessarily a higher and supreme object—the person for whom the objects, that may be possessed, used and enjoyed, are to be acquired. Therefore the object of a supreme choice, whether morally right or wrong, must always be a person or persons to be trusted or served, not any thing, quality or condition to be acquired, possessed, used and enjoyed.

This is evident, also, because a person is essentially by virtue of his personality in himself an *end* of action, a being to be trusted and served, never an object to be acquired, possessed and used. So our Lord teaches that the sum total of all worldly values is not equal to the worth of a man. He has a dignity beyond all price. A person by virtue of his personality has rights. Something is due to him from other persons; they owe him duty. The object of the supreme choice to which the whole activity is to be consecrated cannot be anything which is a means to an end; it must be that which is an end in itself and unconditionally. A person only is thus an end. A person, there-

fore, must be the object of the supreme choice, whether that choice be morally right or wrong.

Hence the true good itself is not the object of a right supreme choice. For the true good is nothing real except as the good of a person; and the choice of it is impossible except as it is chosen for some person.

II. The object of a right supreme choice is God in his relation to all personal beings in the universal moral system.) Or, it is God and all rational beings in their real relations in the unity of the universal rational and moral system.

Here it may be objected that the right supreme choice must be the consent of the will to the reason; the acceptance by the will of the truths, laws, ideals and ends of Reason as regulative of the whole activity; and that the wrong supreme choice must be the refusal by the will of this consent. This accords with Kant's ethics, that the right moral character consists in reverence for law, in the doing of duty. It is true that the right supreme choice carries in it the consent of the will to the law; that so far as action is distinctively moral it involves the recognition of law, obligation and duty; and that the right character involves the fixed purpose of the will to do all duty. This, however, is only a partial and incomplete description of a right moral character. For, in the first place, it is only a resolution to perform actions. It thus remains no more than an immanent volition. It has not in it that which alone is the real determination, the choice of the object of action. And, besides this, the will cannot consent to the formal principle of the law otherwise than in the act of love to God and man which the real principle of the law requires. And, further, the universe is not abstract, but concrete; it is a universe of being. All knowledge, thought and causal energy are attributes of being and terminate on being as their object. But the objection makes the supreme act of will which determines the whole course of action and the whole moral character and destiny of the man, terminate in abstract ideas of law and duty. Virtue thus defined lacks reality.

We must, then, look beyond this to the realm of personal beings to find the object of the right supreme choice. The Absolute Reason is God. In him all truth, law, ideals and good are eternal. The object of the right supreme choice, which determines man's moral character in the whole course of his activity, is God. He is chosen as the supreme object of trust and service.

God, however, does not exist alone, but in relation to the universe in which he is expressing the archetypal thoughts of eternal Reason and progressively realizing the ideals and ends of his wisdom and love. The natural universe exists in the unity of a Cosmos by its relation to God. Personal beings exist in the unity of a moral system having common

relations to each other and to God. They have a common constitution as rational and free. Knowledge, truth, rational and moral principles, ideals of perfection, worth and well-being as estimated by reason, are the same to them all under the one universal law of God. If, then, I choose God as the supreme object of trust and service, I choose him in his real relations to the universe; I consent to the truths, laws, ideals and ends of the supreme reason; I devote my energies to realize as a worker with God all the ends of his wisdom and love in the realm of personality, and so to advance his kingdom of righteousness and peace. In choosing God as the supreme object of trust and service, I choose all rational beings within the sphere of my knowledge and influence as equally with myself objects of trust and service in the moral system in which we are all united. And in that choice my will consents to the truths, laws, ideals and ends which are eternal in the divine Reason and are the constitution of the system of things in which we all exist and act. So Christ declares the object of human service to be God as supreme and our neighbor (every one within our influence) as ourselves.

In a wrong supreme choice, a man chooses himself alone, and thus refuses God, his neighbor and himself in their relations in the moral system, as the supreme object of trust and service.

I have spoken of trust and service. These constitute the entire activity of man so far as persons are the object of it. Trust is the activity expressing man's consciousness of dependence and accords with the reality that man is finite and dependent. Service is the activity expressing man's consciousness of freedom and power, and accords with the reality that man is endowed with freedom and power, and so is a sort of subcreative center of intelligence and energy.

III. The love which is required in the law of God is a free choice of the will.

We are embarrassed by the fact that love in popular language is used with different meanings. We use the word indiscriminately to denote natural appetites or desires or affections, and the moral character required in the law of God. We say indiscriminately a man loves an apple, he loves intoxicating liquors, he loves money, he loves his children, he loves his neighbor and he loves God. It is evident that the love required in the law cannot be the same with love in all the different meanings which it has in popular use. It is necessary to discriminate and to ascertain what is the distinctive meaning of the love required in the law.

Evidently, for the very reason that love is commanded by law, it cannot be a natural appetite, desire or affection, nor even a rational sensibility. For these are constitutional impulses and are only in-

directly and remotely under our own control. A mother's love is instinctive. At the birth of her child it rises in her heart as involuntarily as the milk in her breast. The law cannot command us, as our primary and supreme duty, to feel, to melt in tender sensibility, to equip ourselves with the instincts and impulses of nature.

If, then, the love commanded in the law must be under our immediate control, it must be a determination of the will; it can only be the choice, as the supreme object of trust and service, of God and all personal beings in their real relations in the unity of the universal system. It is the free choice, after thoughtful comparison, of God as the person to whom I consecrate all my energies in trust and service, and of my neighbor equally with myself as the object of trust and service in the universal moral system in which we all are in unity under the common law and love of God. If, on the contrary, I love myself supremely, this selfishness is also the free choice of myself as the supreme object of trust and service.

Here we attain a clear and complete psychological and philosophical distinction between the love which the law requires, and appetites, desires, affections and sensibilities of every kind which in popular language are called love. The affections of nature are involuntary impulses; the love which dominates in the moral and spiritual life is a free and abiding choice of the will.

If this is not so, then the love to God and man which is the essence of all virtue, and God's love which is the essence of his own moral perfection, is not different in kind from a cat's love of her kittens or a cow's love of her calf; and in man no psychological distinction exists between the instinctive appetites, desires and affections of nature, and the love which constitutes obedience to the law and is the essence of right moral character both in man and God. And it is because the love which is the perfection of moral character is man's free choice, that we may describe the man who exercises it, in the quotation aptly applied to him by Kant:

"Liber, pulcher, honoratus, Rex denique regum."

IV. Moral character consists primarily in the supreme choice, of which subordinate choices and all volitional determinations and actions are immediately or remotely manifestations. The state of the intellect and of the sensibilities, and the habits of action have moral character only so far as they have been formed or modified by acts of will. They are moral character only in a secondary sense. This conception is a psychological and ethical basis for the scriptural representation that sin is an apostasy from God, that all men are morally in two classes,

those who trust and serve God and those who do not, and that the change of a sinner to the new spiritual life is a critical change of all-determining moment, represented by a new birth, a resurrection from the dead, and other equally startling analogies. These representations require for their justification and significance a recognition of the unity of moral and spiritual character under some one dominant and all-characterizing determination or choice.

V. The existence of God and all rational creatures in one rational system is the fundamental and dominant truth in theology, and equally in all philosophy, speculative, ethical, æsthetic and teleological. In it philosophy and theology, morality and religion, are at one. Persons exist by and for persons, to trust and serve one another. God, indeed, is independent and supreme. But only through the universe of nature and spirit can he reveal his perfections; and when the universe exists he comes to men in Christ in the form of a servant and advances his kingdom through the agency of redeemed men who are workers together with God. All that is greatest in humanity reveals the membership of man in this rational system. We have seen that the sense of beauty prompts to communicate it. So all that is noblest in man arouses his consciousness of fellowship with man and quickens the feeling that he lives not for himself alone. It arouses a sort of universal consciousness of all rational life mingling with his own in the mightiest inspirations and the most ennobling ends of human action. The illuminism which tries to construct an ethical philosophy on the basis of mere individualism misses what is mightiest and most profound in Christian ethics. The love of God and of our neighbor as ourselves which Christ requires, is, in its essential significance, the choice of God and his rational creatures in their real relations in the unity of the universal moral system, as the supreme object of trust and service.

§ 68. The Freedom of the Will.

I. The freedom of the will consists in the fact that the will is a power which, in the light of reason and under the influence of rational motives, can determine the ends or objects to which it will direct its energy and the exertion of its energy in reference to the determined end or object. In other words, the freedom of the will consists in the fact that the will is a will. The definition of will is in itself the definition of free will.

1. Freedom is inherent in rationality. The will is Reason energizing; or, as Kant calls it, the Practical Reason.

If man were not endowed with reason, he would be susceptible only of natural or instinctive motives and emotions, and would follow the

strongest. Nature would have a clean sweep through him like water through an unobstructed channel. He would have no freedom of will; that is, he would have no will. But because he is endowed with reason he is susceptible of rational motives, motives from above nature. Thus he is able to choose rational ends and to set himself in resistance to nature and its impulses. In this he is free. If he is swept away by nature rushing like a flood through his instinctive appetencies, it is because he yields to the current and consents to being swept away. By virtue of rationality man brings the objects of different impulses or motives into the light of reason, compares them, and chooses which shall be the object of his activity. He rises above his impulses or motives and determines his end. If he were destitute of reason, this would be impossible. He would then be beneath his impulses or motives, and necessarily driven by them.

Thus man's freedom arises from his being endowed with reason. He is free because he is an energizing Reason, or a rational will. So Milton says, True liberty

"Always with right reason dwells
Twinned, and from her hath no dividual being."

Says Thomas Aquinas: "The faculty of will and reason is called free will. Beings who have reason direct themselves to an end when they know the reason of the end."* John Smith says: "When we converse with our own souls, we find the springs of all liberty to be nothing else but reason; and therefore no unreasonable creature can partake of it."† Kant also recognizes freedom as inherent in rationality: "The will is a sort of causal efficiency of living beings so far as they are rational, and Freedom is the attribute of this causal efficiency that it can act independent of foreign causes determining it. So the attribute of the causal efficiency of all irrational beings is a natural necessity of being determined to their activity by foreign causes." "Since Reason is required for action under law, the Will is nothing other than the Practical Reason."‡ He recognizes man, by virtue of his rationality, as belonging to a rational system, "a realm of ends," above nature, and as such capable of determining himself in opposition to natural propensities and influences, and of being determined by laws which his own reason prescribes. He thus lays the foundation of a clear and self-consistent conception of the freedom of the will. But here, again, the malign influence of his phenomenalism as con-

* *Summa Theologiæ, Prima Secundæ, Ques. I., Art. 1, 2, 7.*

† *Select Discourses*, 1673, p. 128.

‡ *Grundlegung zur Metaphysik der Sitten*, Abschnitt III. sub initio, & Absch. II., pp. 78 and 36.

trasted with the knowledge of the "thing in itself," reappears and prevents the legitimate development of his conception.

2. Freedom does not imply the consent of the will to reason, but only the capacity of choosing in the light of reason. Kant and others who have found human freedom in the rationality of the will, have fallen into the error that freedom exists only in a will consenting and obedient to reason. Hence in the act of sin man loses his freedom. They have pushed the identification of reason and will to such an extreme that they cease to recognize the two aspects of the human spirit which render the two names significant and necessary; these two aspects are, first, the power of knowing the True, the Right, the Perfect, the Worthy or Good, and the Absolute, which justifies the name, Reason; and secondly, the power of determining in the light of reason the ends of action and the exertion of energy, which justifies the name, Will. They overlook the freedom of the will, which, as I have defined it, constitutes a being a moral and responsible agent, and substitute for it what has been called *real* freedom, which exists only in the moral perfection of the being and the complete harmony of the determinations of the will with the truths, laws, ideals and ends of Reason.

3. The conception of freedom of the will as consisting in the relation of will and reason—the energizing or practical reason, or the rational will—is a totally different conception from that of Edwards, and lifts us out of the ambiguities and perplexities in which all attempts to develop his conception are involved. According to his conception freedom is discussed from the point of view of efficient causation, and must be defined in terms of power only, as the power of contrary choice. Also the distinction of natural and moral ability which, in accordance with the universal use of language, is legitimately applied to outward acts, is illegitimately applied to the will itself as an explanation of its freedom; with the result, again, that freedom must be defined in terms of power only, overlooking all in which the freedom actually consists. Hence there is left no resource but to distinguish power from itself, as power to the contrary. In this type of thought the will is regarded as merely a power of exertive volition, overlooking its power to determine in choice the ends or objects of its action. In fact the power of contrary choice is only another name for the power of choice. Antecedent to a determination, man is free to choose between two or more. But as yet we cannot speak of a power of contrary choice because no choice has yet been made to which the coming determination is the contrary. After the choice is made and the man looks back on it, his freedom to choose between two comes before him in the remembrance as consciousness that he might have chosen the con-

trary of what he did choose. Thus the fact of free choice itself, under the name which denotes the remembrance of it after it was made, is given us as a rationale or philosophical explanation of the fact of free choice. On the contrary, freedom of will, instead of being defined in terms of power only, must be defined with reference to the three aspects of the human mind, intellect, sensibility and will, and in terms recognizing the three. Freedom is in the fact that man is a rational being capable of determining in the light of reason and under the influence of rational motives both the objects of his action and the exertion of his power to act. This is a conception of freedom which stands clear, unambiguous, self-consistent and reasonable, and is adequate to explain the nature and ground of moral responsibility. At the same time it is a philosophical basis for the doctrine that moral character, without ceasing to carry in it personal responsibility and free choice, is yet deep and continuous under all specific actions; a doctrine which, in spite of the philosophical errors and even absurdities which have historically accompanied it, the deepest Christian consciousness has always held for true, and for which a flippant illuminism has attempted to substitute the conception of the limitation of moral responsibility and character to single, ictic and consciously intentional acts.

II. The determinations of the will differ in kind from the strongest impulse of the sensibilities. Those who deny free-will, hold that man's determinations are simply the action of the strongest impulse under the action of external nature on the nervous organization. Such is the will recognized by Dr. Maudsley, Prof. Alexander Bain and others who acknowledge no spirit in man. It is all the will that is left for them. This, however, is not will; it implies neither self-determination nor freedom. An ox does not freely determine that he will eat grass rather than flesh, nor a tiger that he will eat flesh and not grass. The line of their action and the sources of their enjoyment are determined for them by their own nature. So if man always follows the impulse of sensibility which is at the moment the strongest, the objects which he seeks and the sources of his enjoyments are determined for him in his nature; he has no power to determine his exertions nor the end of his exertion; he has no freedom of will, he is "like dumb, driven cattle."

"Torva leaena lupum sequitur; lupus ipse capellam,
Florentem cytisum sequitur lasciva capella,
Te Corydon, O Alexi; trahit sua quemque voluptas."

The hereditary appetite of an oinomaniac is his will, according to this definition. But it is this which enslaves him. His will is the power, so much as is left to him, freely to consent to or to resist the diseased

appetite. In the consciousness of free-will a man says, with Shakespeare :

"I'll never
Be such a gosling to obey instinct, but stand,
As if a man were author of himself
And knew no other kin."

Kant has distributed the mental phenomena in three classes: Cognition, Feeling, and Appetency or the Conative Powers.* The phrase "*Bestrebungs Vermögen*," faculties of effort or endeavor, is used in German Philosophy as a genus including Will and Desire. Hamilton adopted this classification.† Dr. McCosh also includes the desires or the optative part of man's nature with the will, and selects the name "optative states of mind," as preferable to the name Will.‡ This is, it is true, merely a matter of classification. And yet the separating of desires or appetencies, which are motives of action, from the other feelings and classing them with the will, necessarily obscures the distinction between motives and determinations and tends to the fatal position that the determination is simply the impulse of the sensibilities which is at the time the strongest. But in a free agent, appetencies and desires, however strong, remain always feelings. The determination is his own, and is the distinctive act of will. The Will includes, it is true, the causal efficiency of the soul, its spontaneous causal energy; yet the will is not well described as the conative faculty or faculty of endeavor, because it is distinctively the faculty of determination, determining the end to which it will direct its energies and calling its energies into action when it will. It is to be regretted that writers who believe in free-will should thus adopt a faulty classification which throws out of sight the distinction between determination and motive and tends directly to the denial of free-will.

III. Man's knowledge of his free-will is of the highest certainty.

1. I appeal to consciousness. Prof. Bain enters into an elaborate refutation of this argument from consciousness.§ But he attempts to establish only, what no one denies, that the testimony of consciousness in any particular case is indisputable only as to the existence of the mental state known in consciousness. A man's consciousness that he believes in witches is indisputable as to the fact that he believes in them, but of no authority to prove that witches exist.

Admitting this, I appeal to any and every man to say, Are you conscious of having the power of free choice? Have you ever made a free

* Kritik des Urtheilskraft; Einleitung.

† Metaphysics, pp. 86 and 129.

‡ Divine Government, 274-279.

§ The Emotions and the Will, pp. 511-519; The Will, chap. xi., §§ 9-12.

choice? Prof. Bain objects that no one knows the consciousness of any person except his own, and says not "any fellow-man can carry his consciousness into mine." True; but other persons can inform us as to their own consciousness; and the argument is an appeal to Prof. Bain himself or to any other man to testify in answer to the questions. And I doubt not that every one who answers honestly will answer that he is conscious that he has the power of free choice and is responsible for his actions.

It should be added that the consciousness of moral responsibility involves the consciousness of freedom; these two are inseparable; whoever is conscious that he is responsible for his actions, that he blames himself for doing wrong or commends himself for doing right, is conscious of free choice. No man can blame or praise himself or feel responsible for any event which is in no way dependent on his own free-will.

That man is conscious of free-will and responsibility is admitted even by those who deny free-will. Some, as Hume, Diderot, Mill, admit that men believe themselves free and responsible, but account for their self-delusion by education, habit or the association of ideas. Evolutionists acknowledge that man feels himself responsible for his actions, but account for the belief by the cumulative effects of evolution through many generations. Prof. Bain says that "the sense of obligation has no other universal property except the ideal and actual avoidance of conduct prohibited by penalties." But this is a monstrous misrepresentation of the sense of obligation or duty; and, aside from that, the very infliction of penalties is the recognition of the criminal's responsibility for his actions.

Prof. Bain further objects that the notion of freedom is a "generalization," and therefore "is not an intuition any more than the notion of the double decomposition of salts." But we have seen that free will is nothing different from will, that freedom is essential in the very idea of choice. Consciousness of freedom is simply the consciousness of choosing; it is simply the consciousness in every act of choice of the power of choosing either of two or any one of many objects which are compared as ends of action; and whenever the choice is remembered, it is with the consciousness, "I might have chosen otherwise; I was free to choose any one of the objects compared; the determination was my own and within my own power." What I affirm is that every act of choice and every remembrance of an act of choice is accompanied with this consciousness. These are not generalizations; they are simple acts of consciousness and memory. And to whomsoever I might appeal, I have no doubt he would testify, if he uttered his own spontaneous belief, that every choice he ever made and every remembrance of a choice has been accompanied with this consciousness.

2. This belief of one's personal freedom of choice sustains all the tests of primitive knowledge. It is clear in its own self-evidence. While the consciousness lasts it is impossible to think the contrary to be true; just as while I perceive a stone held in my hand it is impossible for me to think that I perceive nothing. The belief persists in the face of speculative reasoning and conclusion to the contrary; a number of men now living and some in former times have declared their conviction that they are machines, but no one of them has ever practically believed it, or divested himself of the consciousness of his own power of free choice and his own responsibility for his actions. Also, the belief is consistent with itself, with all its legitimate outcome, and with all established facts, truths and laws of empirical, noetic and theological science. My belief of my own free choice and of my responsibility for my actions sustains these four tests or criteria of knowledge so far as I have been able to apply them. Let the reader apply them for himself. Accordingly the eminent physiologist, Dr. Carpenter, says: "If the psychologist throws himself fearlessly into the deepest waters of speculative inquiry, provided that he trusts to the inherent buoyancy of the one fact of consciousness that we have within us a self-determining power which we call will, he need not be afraid of being dragged down into the 'coarse materialism' of the nature-philosophers of Germany."*

3. History proves that the belief that man has the power of free choice and is himself the responsible determiner of his own ends and actions, is inwrought into the consciousness of the human race. It is recognized in government in all its forms; in all laws and penalties; in all moral ideas; in all literature; in all the bargains and contracts of business; and in the language and action of all human intercourse in daily life. The denial of free will involves a revolution of the most sweeping and fundamental character in all these respects. It would "turn the world upside down." It would take out of the life, history and institutions of man all that makes them human.

4. The free will of man is involved in the fact that he is constituted rational, endowed with reason and rational sensibility. A being thus constituted must be able to determine his own ends and actions. A reason when it energizes must be able to call forth its energies into action and to determine the end to which it will direct them. A will, since it determines only in the light of reason, must be a rational will and therefore free. To admit that man is rational is to admit that he is free; to deny that man is free is to deny that he is rational. To assert human reason and to deny the freedom of the human will are

contradictory propositions. To deny human reason and to assert free-will are in like manner contradictions.

5. The denial of free-will is the denial of all moral obligations, distinctions and responsibility; obligation and duty, the distinction of right and wrong, of merit and demerit, and the idea of responsibility for action lose all meaning. If man's actions are irresistibly determined from without himself, as the rising and falling of the beam of a balance is determined by weights (which is Diderot's comparison), then it is impossible to think of him as under moral obligations, as doing right or wrong, as deserving reward or punishment; it is as impossible as to think thus of the beam of a balance. Then a man can no more have a virtuous or a vicious character than a tree can be virtuous because it bears good fruit, or vicious for not bearing it. And so Mr. Bray boldly avows: "If we love the rose and avoid assafoetida, it is not from any free will in the rose to smell sweet and look beautiful, but because its attributes affect us pleasantly. It is the same in the moral world. . . . We put the human rose in our bosom and we avoid the ugly and disagreeable person as we would assafoetida, and for the same reason."*

It is important to insist on this dependence of all moral ideas on the recognition of free-will. A person may reason himself into the belief that nature is only a mechanism, and that man is wholly included in its machinery, and therefore has no free-will; yet, if he saw clearly that his conclusion involved the blotting out of the significance of all moral ideas, he would shrink from a conclusion so contrary to common sense and so destructive to the interest of man and to the very idea of humanity. Through overlooking this dependence men, who deny free-will and regard man and all his actions as necessary products of the forces of nature, yet insist strenuously on the reality of moral distinctions, and thus either contradict themselves by affirming moral ideas which, as everybody knows, have significance only with reference to free-will, or else fall into the sophistry of retaining the words which express the moral ideas while using them with an entirely different meaning.

So also men deny that man is endowed with reason, and limit knowledge to the empirical science of nature, and yet affirm free-will. Thus Prof. Clifford, with all his assaults on Christianity, still held to moral distinctions, to conscience, and to free-will. He says in his *Essays*: "That man is a free agent appears to me obvious, and that in the natural sense of the words. We need ask for no better definition than Kant's;" and he cites Kant's definition which I have already quoted. But it is evident in Prof. Clifford's system of thought there is no place for either reason or free-will in the sense in

* Force, and its Mental and Moral Correlates: by Charles Bray; p. 40.

which Kant uses the words. And when Prof. Clifford goes on to say: "I believe that I am a free agent when my actions are independent of the circumstances outside me," we read him with amazement. He had quoted Kant as saying: "Necessity is that property of all irrational beings which consists in their being determined to activity by the influence of outside causes." And yet, if we read Prof. Clifford aright, man in his being and all his actions is himself a product of nature, and thus is characterized by the very attribute by which Kant characterizes irrational beings. In what sense, then, can Prof. Clifford regard his own action as "independent of the circumstances outside me"? Evidently in the sense only of freedom from compulsion by external force interfering with the spontaneous but necessary development of nature; only in the sense in which a tree grows freely or "the river windeth at its own sweet will." Wittingly or unwittingly, Prof. Clifford, in accepting Kant's definition of will, is using words significant and true in their place in Kant's philosophy, but meaningless in Prof. Clifford's wholly different system of thought.

Prof. Huxley is another example of inconsistency on this subject. He says: "I protest that if some great power would agree to make me always think what is true and do what is right, on condition of my being turned into a sort of clock and wound up every morning, I should instantly close with the offer. The only freedom I care about is the freedom to do right; the freedom to do wrong I am ready to part with on the cheapest terms to any one that will take it off me."* It seems not to have occurred to Mr. Huxley that he cannot be a clock and a man both at once; that if he were made into a clock he would cease to be a man and would become a machine. All the dignity and worth of man, all his power to do right or wrong, all the grave responsibilities and sublime possibilities of his being, all grounds for the divine command, "Honor all men," lie in the fact that man is a rational free agent. To talk about being transformed into a clock and wound up every morning and still doing right in obedience to moral law, is to talk nonsense.

And is it not plain that the theory that nature is a mechanism and man a mechanical product of it, makes all his actions the running of a "sort of clock," all the movements of which are determined, like those of any clock, by the forces of nature, and yet a clock which continually goes wrong, and which is conscious to itself of its own wrong going.

6. It appears from the foregoing considerations that if we regard it simply as an hypothesis that man is a rational free will, it fully ex-

* Lay Sermons: p. 373.

plains and accounts for all the facts of the history of man's action in the universe, and is continually verified by the consciousness and the history of man; whereas the contrary hypothesis, which denies free agency and regards man's action as the necessary result of the mechanical action of nature upon his organization, fails to account for a large number of the most important facts in the life and history of man and fails to recognize them as having real significance.

IV. The common objections to free-will are founded on a false theory of knowledge and are for the most part a mere begging of the question. They are usually founded on some theory which limits knowledge to the phenomena of sense; or which at most recognizes as knowledge nothing beyond the empirical science of nature.

H. Spencer says: "That every one is at liberty to desire or not to desire, which is the real proposition involved in the dogma of free-will," is contrary to consciousness. Every one who recognizes freedom as grounded in reason expressly distinguishes the free determinations of the will from the desires which arise spontaneously from the nature, and affirms that by his free determinations man yields to, resists or regulates natural desires, but denies as strenuously as Mr. Spencer himself, that man is free to desire or not to desire. It is a fallacy to deny a conception of freedom which may be the only one possible from Mr. Spencer's point of view, and then to argue that the denial disproves freedom conceived of in a totally different meaning and from a different view of man.

Mr. Spencer regards the *ego* as merely "the aggregate of feelings and ideas, actual and nascent, which exists" at the moment. He talks of "the cohesion of psychical states," as if they were entities or atoms, and himself a mediæval schoolman. With such a psychology, freedom is as impossible to man as it would be to a hot day at any particular moment. Mr. Spencer says for substance, that if the *ego* is not present in consciousness, we have no knowledge of it; and if it is present in consciousness, it is a constant quantity and therefore indistinguishable from the consciousness. But if man is so constituted as a rational being that in every perception of an outward object he necessarily knows himself as percipient, if in every act and state of consciousness he necessarily knows himself as subject of that state and agent in that action, and if the knowledge of himself as knowing is essential to the knowledge of the object, so that without it knowledge itself vanishes away, then Mr. Spencer's speculations do not alter this fundamental fact and primary law of the human mind. And if I exist and I know, then also I can choose and choose freely. It is true, as Mr. Spencer says, that in every affirmation of free-will is the supposition of a conscious self as distinguishable from the psychical states.

The free-will is the I, the Ego, the person, determining his ends and exertions amid the multiplicity of his ideas and impulses. In affirming my free-will I affirm that I exist; in denying my free-will I deny that I exist. My belief in free-will is as deeply rooted and as thoroughly warranted in the very constitution of my being as is my belief in my own existence.

Mr. Spencer further says: "Psychical changes either conform to law or they do not. If they do not, this work . . . is sheer nonsense; no science of psychology is possible. If they do, there cannot be any such thing as free-will." He means by law an invariable sequence of natural phenomena. Substitute this phrase for "law" in these sentences. "Psychical changes are either invariable sequences of nature or they are not," etc. Evidently this is not an argument, but a begging of the question. The question is whether choices and volitions are included in the uniform sequences of nature or are determinations of will. And he says that if they are not uniform sequences of nature, no science of psychology is possible. This is not only a begging of the question, but also an arrogant assertion that if they are not uniform sequences, but are determinations of will, they must be excluded from all scientific investigation. The will is subject to law as really as nature is; but it is moral law, the law of love addressed to rational free agents, who, in the exercise of their freedom, may obey or disobey. The moral system is a realm of law as really as the natural.

He also says: "The freedom of the will, did it exist, would be at variance with the beneficent necessity displayed in the evolution of the correspondence between the organism and its environment. . . . That gradual molding of inner relations to outer relations, . . . that ever-extending adaptation of the cohesions of psychical states to the connections between the answering phenomena, which, we have seen, results from the accumulation of experiences, would be hindered did there exist anything which otherwise caused their cohesions."* But here again, instead of argument, we have a begging of the question. For the very question is whether, in addition to the system of nature and transcending it, is a system of reason and free-will. The existence of such a system does not involve the non-existence of the system of nature, nor annul its uniform sequences, nor add to nor subtract from the aggregate of its atoms and its forces. But it is a system of rational beings and of free-will, *fatīs avolsa potestas*. Nor does its existence defeat the beneficent adaptations of nature; on the contrary, it is itself a realm of ends; rational free agents do not exist to be tools and implements, but are themselves ends, for which nature itself exists. They

* Spencer's Psychology, § 219, Vol. I., pp. 500-503.

belong to a rational system grander than the system of nature, with the wise and beneficent and all-comprehending design of expressing the archetypal thoughts of reason, extending the reign of moral law, realizing rational ideals of perfection and the ends which reason approves as worthy, and so establishing, extending and perfecting the kingdom of God in grander worlds and ages eternal. Rational beings act in and upon the natural system; but they do it no violence, and by their agency advance it in its development to perfection.

As to Mr. Spencer's belief that if there were free-will there "would be a retardation of that grand progress which is bearing humanity onwards to a higher intelligence and a nobler character," it is a notorious fact that man by his wickedness of every kind has effected a great deal of that "retardation" of all good; and that science must find a place for this fact. Free-will fully explains it. But if all this wickedness is the result solely of the necessary and normal action of nature, it is incompatible with the "grand progress" effected by evolution, and it becomes Mr. Spencer to speak with some less assurance of the "beneficent adaptations" of nature; especially as all the beneficent results must be realized in man's natural life on earth, and there is no grand outlook to higher results in the sphere of the spiritual and unseen. Science gives us a grand conception of evolution in nature. Theism, and especially Christianity, gives us a grander conception of a "new heavens and a new earth wherein dwelleth righteousness," and of an evolution in spiritual life and power immeasurable and eternal.

V. The theory that man's character and action are determined by the forces of nature acting on him to the exclusion of free-will is contrary to the facts of human history. Diderot states this doctrine:—"Examine it narrowly and you will see that liberty is a word devoid of meaning; that free agents do not and cannot exist; that we are made what we are by the general course of nature, by our organization, our education and the chain of events. We can no more conceive of a being acting without a motive than we can conceive of one of the arms of a balance moving without a weight. The motive is always external and foreign, fastened on us by some cause distinct from ourselves." Here again is a misrepresentation; freedom does not imply that a man acts without motives, but that among conflicting motives he chooses his end in the light of reason and with susceptibility to the influence of rational motives over against the natural or instinctive impulses; and the motives themselves are not all "external and foreign."

In accordance with this denial of freedom, it is held that the diversity of nations in character, institutions and civilization is the result solely of the influence of climate, soil and other peculiar cosmic agencies.

Now I affirm that this theory is contradicted by the facts of human history.

1. Different countries within the same isothermal lines and subject to essentially the same cosmic influences, ought, according to the theory, to develop the same civilization; but it is notorious that they do not. Mr. Buckle adduces in support of this theory the similar conditions of climate and soil in India, Egypt and Mexico, as explaining the similarity of their ancient civilization. But for similar reasons he acknowledges that we should expect a similar civilization in South America, on the East side of the continent, while in fact it was found only in Peru on the West. Why did not these similar cosmic influences produce the same civilization in Brazil? Mr. Buckle gives only an inadequate answer. After a brilliant description of the luxuriance and opulence of nature there, he says: "Amid this pomp and splendor of nature, no place is left for man. He is reduced to insignificance by the majesty with which he is surrounded."*

Dr. Draper has attempted to apply the same theory in the writing of history. In "The Intellectual Development of Europe" he accepts the old generalization, made by the fancy and not by the judgment, that "nations pursue their way physically and intellectually through changes and developments answering to those of the individual, and represented by Infancy, Childhood, Manhood, Old Age and Death respectively." This fancy is contradicted by the facts of history. Besides, how can the same influences of configuration of territory, nearness to the sea, soil, climate and other cosmic agencies, produce on the same nation so contrary effects as first to cause it to grow, and then to decline, and finally to cause its death? And how is this fancy consistent with the theory of evolution and with "the beneficent necessity" involved in it, on which Mr. Spencer insists, that "the life must become higher and the happiness greater?"

In his "History of the American Civil War," Dr. Draper applies the theory of cosmic influences to explain that history; or, as it seems more probable, wrote the history to exemplify his theory. He says: "Climate and place of abode, not only in a superficial, but in a profound manner, can change the constitution and construction of man." "The antagonism of habit and thought must be between the North and the South; there will be harmony between the East and the West." When it is remembered that the territories known as the North and the South are contiguous and the dividing line winds up and down through four degrees of latitude, it is incredible that climate should have caused the alleged differences. If the people of the two sections

* History of Civilization, Vol. I., chap. ii.

were alike when they emigrated, as, according to Dr. Draper's theory, being of the same race and emigrants from the same island, they should have been and as his argument assumes they were, it is a marvellous instance of the rapidity of evolution that such changes should be effected by it in so brief a time; if evolution is proceeding at this rate, why has it effected so little in all the historical period? Dr. Draper says that while the climate of the South favored slavery, it "promoted a sentiment of independence in the person and of State Rights in the community;" while at the North climate "intensified in the person a disposition to individualism and in the community to Unionism." At the same time the physical geography of the two sections aided this influence, and produced centralization in the North and separation in the South; "the one tended to diversity, the other to unity."

These are certainly wonderful generalizations. They are also plainly contrary to history, for the distinctive characteristics of the people of the Northern and Southern colonies existed when they came from England and can be traced in the colonies from the beginning. Does Dr. Draper suppose that the difference of the two classes of English people represented by the Puritans and the Cavaliers, was created by different cosmic influences in the small territory of England? And can he explain the remarkable differences between the English and the Irish of the present time by cosmic agencies? Dr. Draper further says: "Let it be proposed to ascertain what would be the character of a European population placed on the Atlantic border," between the isothermal lines which bound the Southern States; "we shall have to ascertain in what part of the old world the same isothermal zone occurs; then we shall have to learn from history the character and acts of the nations who have inhabited that zone;" and we may expect the same characteristics to appear in the South. But if we follow this isothermal zone along the Southern shores of the Mediterranean, through Palestine, Central Persia, and onwards around the world, we find no people bearing any peculiar resemblance to the people of the Southern States; certainly we do not find the doctrine of State Rights, which, according to Dr. Draper, is a necessary result of this peculiar climate. And we may further ask why this climate, which has acted so powerfully on the whites, has had no perceptible effect on the negroes? Dr. Draper is so confident that he even indulges in prophecy; speaking of the climate-zone of our Pacific coast as analogous to that of Asia, he says: "Man also in these varied abodes will undergo modification; and since, under like circumstances, human nature is always the same, the habits and ideas of the old world will reappear in the new. The arts of Eastern life, the picturesque orientalism of

Arabia will be reproduced in our interior sandy deserts, the love-songs of Persia in the dells and glades of Sonora, and the religious aspirations of Palestine in the similar scenery of New Mexico."*

I have dwelt the longer on this work, as exemplifying not only the contrariety of this theory to facts, but also the trumpery which is sometimes imposed on the public in the name of science. It also exemplifies the rash generalizations and inferences in the philosophy of history which are so easy to any man who writes history in the interest of a theory. One who writes history from a theory has no need of facts. He develops it all from his own inner consciousness.

A recent writer ascribes the gloomy Calvinism of Scotland to its bogs and fens and fogs. He forgets that Calvin himself lived in Geneva, and Augustine, who taught essentially the same system, in the north of Africa.

2. This theory is contrary to historical facts as to the civilization of the same country in different ages. Egypt, with its early science and civilization, Palestine, the mother of true religion, Greece, with its unrivaled culture, had the same cosmic influences in ancient times as now. Why were the peoples of these countries so great in ancient times, so mean and insignificant now? Why was Italy in ancient times without distinction in painting and sculpture, and yet with the same soil and climate and all cosmic influences, why did Italy take the lead in these and all æsthetic culture at the renaissance and after? Such questions may be multiplied. And here again the theory under consideration is directly contradicted by the facts of history.

If cosmic influences in America have so powerfully affected the Europeans and their descendants who inherit it, why have they not produced in them the distinctive characteristics of the Aborigines? Dr. Büchner appears to be the only scientist who has observed any fact of this kind. When in this country he wrote to a periodical called the *Gartenlaube*, a communication which was published, saying that he had observed that American ladies in dancing have a gliding motion, like the stealthily gliding step of an Indian; proving, as he profoundly remarks, that with all their civilization they have not been able to resist the climatic and other cosmic influences under which they live. The gliding tread of the Indian may be observed by any one in Cooper's novels. And why, again, were not the differences now characteristic of the North and the South found among the Indians at the discovery of America?

* History of the American Civil War, Vol. I.; Causes of the War and the events preparatory to it, pp. 91, 93, 242, 255, 113, 103.

3. I believe that human history is the progressive realization of an all comprehensive plan :

"Through the ages one increasing purpose runs,
And the thoughts of man are widened with the process of the suns."

But it is a plan or purpose of wisdom and love; a plan in which nature is not merely a blind concatenation of physical effects with no law except the invariable succession of mechanical facts and transformations of force, and with no power except a resistless efficiency acting without intelligence or purpose; but nature is itself a cosmos in which the truth of absolute reason is expressed and the wise and beneficent designs of reason progressively accomplished. It is a plan which comprehends also a system of rational free agents under the moral government of God; a rational system to whose higher ends nature itself is subordinate; in which law is the truth of reason recognized by rational free agents as law to the action of will; in which the progress consists in quickening, disciplining and educating rational beings to perfection and so bringing them into harmony with the supreme reason and with each other in a kingdom of God, a commonwealth of righteousness, good-will and true blessedness; and in which the great result is progressively accomplished, not merely by the action of cosmic forces on physical organizations, but by the influences of God's gracious and all-pervasive activity in the exercise of perfect wisdom and love, and through the agency of human intelligence, human aspirations and affections, and human choices and volitions, in all their free, rich and complicated activities.

§ 69. Free-Will and Man's Implication in Nature.

Though man exercises free-will, he is, nevertheless, implicated in nature. Nature acts on him from without as well as within his physical organization. It is necessary to inquire what is the action of man's free-will under the immediate influence of nature and the cosmic forces.

I. Man is implicated in nature.

His physical organization is a part of nature as really as a tree is. It grows from a seed, as the tree does. His body like all bodies, is subject to gravitation, and to the action of the forces of cohesion, heat, light, electricity and chemical affinity.

He is also implicated in nature through his natural sensibilities. Hunger and thirst, the sensations of heat and cold, the natural instincts, propensities, desires and affections, are only indirectly under the control of his will. Through them man's implication in nature reveals itself in his consciousness. In these respects man is the crea-

ture of circumstances. His feelings arise as he is acted on by what is around him.

II. Man is also endowed with reason and susceptible of rational motives and emotions. The latter presuppose an exercise of the higher reason and are always motives which man may follow in opposition to all impulses which come directly from his circumstances. He is not left, therefore, helpless to the force of winds and waves, but has rudder and sails and skill to manage them, by which he can compel an adverse wind to propel him on his course; or even has within himself motive power to propel him on his chosen course independent of winds or currents.

This endowment constitutes man capable of free choice; and this constitutional capacity of free choice is inseparable from the man; no course of action, no acquired character, however vicious and degraded, can destroy it. It cannot be annihilated except by annihilating the man. Consequently, however ignorant, vicious and degraded a man is, he is always capable of knowing the truth which reveals to him the higher possibilities of his being, and of appreciating the rational motives to realize them. This is tacitly acknowledged in all efforts to reform the vicious.

A child born in the slums of a great city is likely to grow up ignorant and vicious. It grows up not only under the adverse influence of present circumstances, but also of a vitiated constitution transmitted by heredity from vicious ancestors. Facts like this exemplify the powerful influence of outward circumstances. Yet this child in all its degradation retains the capacity of moral culture and discipline and the susceptibility to influences to good. This is not only acknowledged in all benevolent efforts to save such persons, but is verified in many instances in which they have been reformed and saved. The history of Christianity abounds in instances of the effectual and permanent reformation of wicked men. Facts of the former class which prove the power of outward circumstances, must not be used to prove man's destitution of free-will, with the suppression of facts of the latter class which prove that the most degraded have power of will to resist the influences of evil and to reform.

Dr. O. W. Holmes says: "Do you want an image of the human will or the self-determining principle as compared with its prearranged and impassable restrictions? A drop of water imprisoned in a crystal; you may see such a one in any mineralogical collection. One little fluid particle in the crystalline prism of the solid universe." The rhetoric here is better than the logic. No one claims that man by his free-will can lift himself out of the universe or prevent the action of its cosmic forces on him. It is unfair to compare the effects wrought by the will

of a single man with the effects of the cosmic forces. But in the true sphere of the will and the true relation of its action to nature the will is entirely free, and whether it effects much or little upon the face of the solid earth, it effects everything in the sphere of morals.

III. The freedom of man from the necessary control of outward circumstances is manifested as matter of fact in the following particulars :

1. Man in the exercise of free-will may resist the impulses of natural sensibility or may concur with them. He can resist his appetites. Men have had force of will to resist hunger and starve themselves to death. So it is with every appetite, desire and affection. Every one may be resisted. Under the full force of the motive, a man may choose another object and direct his energies to that. Even the desire of life is no exception. Martyrs deliberately sacrifice life to the sense of duty, and men risk it every day for various ends and from various motives. Man can determine to follow reason and do duty in direct resistance to any or all natural impulses.

Man may also, at his option, concur with natural desire either with or without the approval of reason. He may obey natural desire and disobey reason ; or he may obey reason and resist natural desire ; or in certain cases he may follow natural desire and reason both at once. Even though in following a natural impulse the man has not been conscious of deliberating and consenting, yet this free consent must have been given. Man cannot divest himself of his reason and his susceptibility to rational emotions. If, like a beast, he thoughtlessly follows his strongest impulse, yet is he unlike the beast in this, that he knows the obligation which is on him to obey reason. Hence we properly say of such a man that he has given himself up to his appetite, that he has abandoned himself to his passion, that he has allowed himself to be hurried away by his impulses.

As man is endowed both with natural sensibilities and rational, the right conduct of life consists in regulating these contrasted impulses and keeping the right course under the motive force of both. Plato compares the two to the two horses of a chariot ; one nervous and frisky, the other steady and grave, which the charioteer must make to work together and persistently draw the chariot towards its destination.*

2. Under any circumstances a man may do right. We sometimes hear of coercing the will. But physical force cannot act on the will directly. The will cannot be coerced any more than an inference can be drawn by horse-power. The man may be imprisoned or bound ; his muscular action may be restrained ; but all the time the will remains

* Phædrus, 246.

unchanged and free in its choice. Force can influence only as it becomes a motive to choice and volition.

"Stone walls do not a prison make,
Nor iron bars a cage:
Minds innocent and quiet take
That for a hermitage.

"If I have freedom in my love,
And in my soul am free,
Angels alone that soar above
Enjoy such liberty."

Because man is free he is under obligation to obey law; and he is able under all outward circumstances to do his duty. And here I may properly cite Kant's apostrophe to duty: "Duty! thou great, sublime name! Thou dost not insinuate thyself by offering the pleasing and the popular, but thou commandest obedience. To move the will thou dost not threaten and terrify, but simply settest forth a law, which of itself finds entrance into the soul; which even though disobeyed wins approval and reverence, if not obedience; before which the passions are silent even though they work secretly against it. What origin is worthy of thee, and where is the root of thy noble pedigree, which proudly disowns all relationship with the passions, and descent from which is the indispensable condition of that worth which alone man can of himself confer on himself? It can be nothing less than that which lifts man above himself so far as he belongs to the world of sense, and unites him to an order of things that subjects to itself the entire world of sense, as well as the existence of man so far as it is empirically determined in time. It is nothing less than personality; that is, freedom from and independence of all the mechanism of nature; and this implies that man himself, considered as belonging to the world of sense, is subjected to his own personality so far as he belongs to the rational system. No wonder then that man, belonging to both worlds, must regard his own being, in its connection with this higher system, with reverence, and its laws with the highest veneration."*

3. He may reverse the influence of motives. By continued resistance of evil inclinations and following the worthier motive man may so form his own character that eventually the motive occasioned by the outward circumstances may become contrary to what it has been. One may form a character so pure that scenes of debauchery are disgusting and repulsive; another may form a character so impure that

* Kritik der Praktischen Vernunft: Theil I., B. I., S. 214.

the smell of the dram-shop and the ribaldry of the stews may seem to him an irresistible attraction. And the latter may reform, and by continued purity may come to be disgusted and repelled by what had been so attractive. We create in a great degree our own susceptibility to temptation. The fact that a person is powerfully tempted to evil may be evidence of his blameworthiness rather than an extenuation of it. How came it to be so powerful a temptation to him, when to his next neighbor, perhaps, it is utterly repulsive? Why is he not tempted by powerful desires to a life of purity, industry and honesty?

The same is true of the direct enticements of evil men. Why do not burglars invite an honest citizen to join them in breaking a bank? Why do not debauchees come to a pure, sober and industrious man and entice him to join them in riot? Because they know that his character makes him inaccessible to such temptations. But let a young man once get drunk or once be detected in theft or fraud, then the debauchees and the criminals hail him as one of their own number, give him the right hand of fellowship and seek his partnership in their misdeeds.

"So dear to heaven is saintly chastity,
That when a soul is found sincerely so,
A thousand liveried angels lackey her,
Driving far off each thing of sin and guilt."

The pure character is like the angel guard. But by open act of vice the man loses this protection, the angels strike their tents, and the soul is left defenceless to the approach of the tempter.

4. It is in man's power, when his outward circumstances occasion temptation, to escape the temptation by changing his circumstances. If a reforming drunkard is tempted by a dram-shop on the way to his place of business, he can go by another street. In this way he can aid himself in forming a character so pure and strong, that the dram-shop will cease to be a temptation.

5. The man can lay hold of aid offered by others in resisting temptation and forming a right character. We are born into society; we are members of a community. No man can live alone in independence of his fellows. It is man's normal condition to depend on his fellow-men. It is true of every person that a great number of persons are engaged every day, knowingly or unknowingly, in serving him and contributing to his welfare. It is no infringement of one's freedom to depend on others and to receive their aid. And always in every state of society there are many excellent and benevolent people who would gladly aid any one who has fallen to return to a virtuous life. The man most fully given up to the control of evil may seek this help,

may associate himself with the good rather than the evil, and thus surround himself with healthful influences till he recovers moral strength.

6. He can also seek the help of God who ever seeks to save the lost. All right living must begin in faith, for we are all weak and dependent, as well as sinful. Whatever be the moral impotence which makes the vicious unable to cope with his disordered appetites and passions, he at least is free to cry to God for help and to cast himself on that divine grace which will be found sufficient for him.

7. The will has a limited power to control the effects of natural agents on the body. The power of the mind over the body in reference to disease is well known, and has been exhibited in a great variety of well-attested facts. Dr. Carpenter cites striking examples.* Dr. Brown Sequard says: "There is no doubt at all that if we could give to patients the idea that they are to be cured, they would often be cured, especially if we could name a time for it, which is a great element of success. I have succeeded sometimes, and I may say that I succeed more now than formerly, because I have myself the faith that I can in giving faith obtain a cure. I wish that physicians who are younger than myself and who will have more time to study this question than I have, would take it up. . . . Indeed a cure may thus be obtained in certain organic affections; even in dropsy it may lead to a cure." It has been regarded as an historical fact that Napoleon in his Eastern expedition visited the plague-stricken in the hospitals in order to prove that the man who could vanquish fear could vanquish the plague. Prince Metternich doubts this as having no better authority than the false bulletins which Bonaparte systematically published in his campaigns. Goethe, however, accepting it as true, relates a similar effect of his own will in protecting himself under exposure to contagious and malignant disease, and adds: "It is incredible what power the moral will has in such cases. It penetrates, as it were, the body, and puts it into a state of activity which repels all hurtful influences. Fear, on the other hand, is a state of indolent weakness and susceptibility, which makes it easy for every foe to take possession of us."† Mr. Bray quotes from *The Spectator*: "Almost every physiologist will admit the power which pure Will has over the nervous system; that it can prolong consciousness and even life itself for certain short spaces, by the mere exertion of vehement purpose." Mr. Bray adds: "A pure volition is the correlate or equivalent of so much physical force, and this change of vital or vegetative force to mental,

* Human Physiology, §§ 829-838.

† Eckermann's Conversations with Goethe: pp. 392, 393.

and of mental back to vital, is seen to be one of the commonest acts in nature, when once observed. There is always a sufficient mental force in reserve, if the will be strong enough to bring it into action, to act upon the vital, that is, the digestive and assimilative powers, and thus to gain new force for a time from the world without."* But what is this will which brings the vital force into action? Advanced physiologists recognize no vital force, and, above all, no mental force. It is all mechanical force variously transformed. On this theory there is nothing which can lift itself out of the necessary and invariable sequences of mechanical action and bring one part of this decaying power into action to quicken into intenser action another part of this decaying power, and so to arrest the course of natural decay. There must be a rational free will.

8. Man by his free will is able to direct and control the forces of nature to the effecting of results which nature, left to itself, could never have effected. He tames the brutes to do his work, compels the earth to give up its savage growth and to bear his harvests, and develops the rude vegetation of nature to bear food more nutritious and luscious to the taste and flowers more beautiful to the eye; he puts his water-wheels into the streams and compels the power of gravitation to grind his grain and weave his cloth; he evokes the forces slumbering in wood and coal and water, and compels them to serve him; he lays his hand on the ocean and compels it to bow its huge shoulders to transport his merchandise. When the mind of man takes a step all nature takes a step with him. As man becomes civilized he civilizes the savage earth. The time will come when over all the earth man's selection will have superseded nature's selection. "Instead of the thorn shall come up the fir-tree, and instead of the brier shall come up the myrtle-tree. The wilderness and the solitary place shall be glad for them, and the desert shall rejoice and blossom as the rose." Says Wallace: "From the moment when the first skin was used as a covering . . . the first seed sown or root planted, a grand revolution was begun in nature, a revolution which in all the previous ages of the world had had no parallel; for a being had arisen who was no longer necessarily subject to change with the changing universe, a being who was in some degree superior to nature, inasmuch as he knew how to control and regulate her action, and could keep himself in harmony with her, not by a change of body but by an advance in mind. Here, then, we see the true grandeur and dignity of man. On this view of his special attributes we may admit that even those who claim for him a position and an order, a class or a subordinate kingdom by himself, have some rea-

* Bray on Force: pp. 102, 103.

son on their side. He is indeed a being apart, since he is not influenced by the great laws which irresistibly modify all other organic beings. Nay, this victory which he has gained for himself gives him a directing influence over other existences. Man has not only escaped natural selection himself, but he is actually able to take away some of that power which before his appearance was universally exercised. We can anticipate the time when the earth will produce only cultivated plants and domestic animals; when man's selection shall have supplanted natural selection; and when the ocean will be the only domain in which that power can be exerted which for countless cycles of ages ruled supreme over the earth."* In discussing the influence of climate on civilization, Dr. Draper meets the fact that cold climates do not produce the full effect expected. This objection he ingeniously repels by the fact that man, "as endowed with reason," creates artificial heat and thus "can create an artificial climate."† This not only exemplifies the special pleading already referred to, by which facts inconsistent with the theory of civilization by cosmic agencies are evaded, but also exemplifies the fact now under consideration that however man is implicated in nature and whatever the effect of cosmic agencies on him, he is able by his free will to modify the effect of these agencies and to guide them to the accomplishment of his own ends. The civilization of the earth itself goes on with the civilization of man. It is not merely the outward world which modifies man, it is also man who modifies the outward world.

In this sense man has dominion over nature and is rightly called the lord of nature. In the heathen religions man is regarded as subject to nature; the gods which they present as objects of worship are powers of nature. But in the Hebrew scriptures from the first chapter of Genesis onwards, God is recognized as above nature and nature ever dependent on him; and man is recognized as in the image of God and thus not submerged in nature but distinguished from it; to him is given dominion over nature; he is to use it and all its resources, its plants and its animals for his own service and for the accomplishment of his own ends. The writer of the eighth Psalm, it may easily be supposed, alludes to these representations in Genesis, when he describes the greatness of man, as made "little less than divine": "Thou settest him over the work of thy hands, Thou hast put all things under his feet." The Psalmist specifies all sheep, and oxen, and the beasts of the field, perhaps as being in that day the most striking example of man's dominion over nature, at which the world was still expressing its won-

* *Anthropological Journal*: 1864.

† *American Civil War*. Vol. I., p. 104.

der as we are now at the steam-engine and telegraph. To this latter subjugation of forces a modern writer would be likely to allude as his examples. But through the Old Testament the fact that man, the worshiper of a God above nature, is himself appointed to possess and use nature's resources and energies instead of worshiping them, continually reveals the contrast between the Hebrew religion and the nature worship of the heathen. The author of the epistle to the Hebrews, alluding to this psalm, says, we do not yet see all things put under man; he has not attained the consummation of his dominion over nature; but, says this writer, we see the man Christ Jesus, who for a little time was made lower than the angels for the suffering of death, now crowned with glory and honor, and in him we see the type of man's exaltation and lordship in the image of God. And we also know, though the thought is not expressed by the writer of the epistle, that through Christ, the type at once of man's humiliation in weakness, suffering and death, and his exaltation in the likeness of God, man is attaining in the progress of Christ's kingdom and of Christian civilization the consummation of his possession and use of the resources and powers of nature, and thus of his dominion over it.

In reference to this power of man to subdue and civilize nature and thus to have dominion over it, we may accept Jacobi's designation of free-will as a miracle-working power (*Wunderkraft*); that is, it is not determined by nature, but is itself able to direct the forces of nature, to determine their effects, and so to cause them to effect what, left to themselves, they would never have accomplished.*

— IV. Man's implication in nature itself indicates that he is above nature. (?)

Nature in some aspects seems to be a limit or boundary. But in other aspects it seems to be no longer a boundary, but a sphere opened to man's knowledge and energies, and immeasurably rich in resources for his use.

By the senses the realm of nature is opened to man's perception. This is not a limitation, but a breaking away of bounds. For the universe of nature is the real universe in which man lives; and by the senses, as so many windows, this whole universe is opened to his perception and admits him to expatiate amid its grandeurs. It has been said that nature wakes to consciousness in man. It is true at least that through the senses nature is imaged in man's consciousness as in a mirror, in which nature, if it were intelligent, might see itself.

Again, the perception of nature is the occasion in experience on

* Jacobi, Werke, Vol. II., p. 45.

which rational intuitions arise. In the impact of mind on nature the principles of reason, which regulate all intellectual and physical power, flash into sight and remain written in luminous letters on the mind, guiding all investigation. By these man passes beneath and beyond what the senses disclose, knows the hidden powers and agencies of nature and its rational principles, laws and ends, and translates it into empirical and philosophical science. Thus in a more profound significance nature is imaged in man's consciousness and he becomes a microcosm. As from eternity the universe existed in the truths, laws, ideals and ends, archetypal in the divine reason, and is but the type of those archetypes, so man, who is the image of God, surveying the universe from the hither side, reads the archetypes in the types, and again idealizes the universe both in its sensible forms and its rational principles in his own mind, as God does in his eternal thought. Here again nature is no boundary or limit, any more than a flint is a limit to the steel which strikes fire on it. It is the occasion on which reason reveals itself in man. It is the seeming obstacle, impact on which strikes out all aglow the hitherto hidden spark of reason and kindles the divine light within the man, which at once reveals his reason to himself, reveals nature to his reason, and discloses, both in the natural and the moral systems, the "steps up to God." Byron wished for "something scraggy" to break his thought on. Nature is the "something scraggy," the seeming obstacle and limit, on which the mind breaks itself and discovers at once the vastness of its sphere and range and the grandeur of its powers.

A similar train of thought is equally applicable to man's will and causal efficiency. Here also nature seems to be a limit and boundary. And certainly the savage with his toolless hands is shut in very closely by the untilled ground bearing weeds and brambles, by the great forests and rivers and by the ocean. But man in conflict with nature gradually subdues and civilizes it and gets possession of its resources and powers. In so doing he civilizes and develops himself, and presently finds himself not the prisoner but the lord of nature. Thus, again, in the conflict with nature he gets possession of its riches and resources and of his own; he discovers at once the wide and rich sphere of his action and the grandeur of the power with which he acts. And in like manner, by struggle, conflict and suffering his distinctively spiritual powers are disciplined and developed.

And here even death itself is a liberation rather than a limit. By limiting the earthly life it compels the spirit to look beyond death to a life immortal and to become acquainted with God and the spiritual powers of the unseen and spiritual world.

It may be added that man is, so far as this earth is concerned, the

highest end to which nature has attained and toward which it has always been striving. He seems to be endowed with all the forces of nature as well as with the powers of spirit. They are all taken up and represented in him. It is also said that the human embryo before birth passes through all the inferior zoological types. All this plainly indicates that man is at the head of all creatures on the earth, and to him all nature is and always has been tributary. Before he appeared nature was tending towards and preparing for him; since his appearing nature has been the sphere in which he has acted, the storehouse of his resources and the occasion and means of his development and progress.

His implication in nature, therefore, however it may restrict him at particular points, is in its whole effect on him a liberation and development, not a restriction and a stunting.

I add a fancy which is not inconceivable. I have already spoken of the power of the mind over the body in preventing and removing disease, and of the increased attention of physicians to the subject. It may be conjectured that if man had never sinned and the spirit had always exerted its legitimate influence on the body, the latter might have become greatly invigorated, and ultimately a "spiritual body" might have been evolved within the coarser organization and at last have taken its place; and that instead of this change being effected only by that which we call death, it might have been effected as imperceptibly as is the complete renewal of the matter of the body every few years, and the transition have been as gradual as that from infancy to manhood. Then the old theological doctrine that man's death was introduced by sin would become true. The existence of the spirit after death in a spiritual body is the culmination of the spirit's freedom from restriction in nature. It is conceivable that it may yet be realized in a way more in accordance with the course of nature from the beginning than has been commonly supposed.

§ 70. Different Meanings of Freedom.

The word freedom has been used by writers on the will in four different meanings. These four kinds of freedom may be designated respectively as moral, physical, real and formal freedom. The failure to discriminate between these different uses of the word has been a source of much confusion of thought. The first is moral freedom. This is the freedom which is necessary to moral responsibility and moral character. It is the freedom considered in the last section, and is the freedom of the will or free agency in its proper sense. As the necessary prerequisite to moral responsibility and character, it may be called moral freedom.

In a second meaning, it is freedom from coercion, that is, from ex-

ternal constraint and restraint. This, for want of a better name, may be called physical freedom. This is the sense in which Edwards uses the word. "The plain and obvious meaning of the words freedom and liberty is, *The power, opportunity or advantage that any one has to do as he pleases.* . . . This is all that is meant by it; without taking into the meaning of the word anything of the *cause* of that choice, or at all considering how the person came to have such a volition; whether it was caused by some external motive or internal habitual bias; whether it was determined by some antecedent volition or happened without a cause; whether it was necessarily connected with something foregoing or not connected." And he explains that the only contraries of freedom are constraint, by which a person is forced to act contrary to his choice, or restraint, by which he is forcibly prevented from doing as he pleases.* Freedom is here explicitly denied of the choice itself; all distinction between choice, volition or determination and the necessary impulses of nature is explicitly disclaimed; and the freedom is explicitly restricted to the absence of coercion compelling or hindering the person's action after the choice or impulse. Every dog which runs at large has precisely the same liberty.

Freedom of this kind is not essential to moral agency. Paul in the inner prison, with his feet fast in the stocks, had not liberty to do as he pleased. But his will remained free; he had not lost his moral responsibility; he could do his whole duty to God and man.

Freedom, used in a third meaning, has been called Real Freedom. This exists when a man does as he chooses unimpeded by any abnormal counter-influence from within himself. A drunkard resolves on total abstinence. In acting according to his resolve he is hindered by his morbid appetite. We say he is not free, but is a slave of appetite. The freedom here spoken of is Real Freedom.

Freedom in this sense is not essential to moral agency. Whatever sinful habits a man may form and however he may be enslaved in sin, he does not lose his moral freedom nor his responsibility for his action; he does not cease to be a guilty sinner. He has lost real freedom, but not freedom of will.

Real freedom exists only in the complete harmony of the rational and natural motives with one another and with reason. It can exist only in perfect holiness and the complete recovery from all the evil effects of sin.

It may be objected that a person wholly sinful, as Satan is supposed to be, would have real freedom by having attained complete harmony of his being in sin. But this is impossible. Reason and conscience,

* Freedom of the Will, Part I., sect. v.

the regnant powers of the soul, are always opposed to sin. And in the perverting life of selfishness the sensibilities themselves come into conflict with each other. The gratification of one desire is the denial of another. Appetites, desires and passions, fevered by selfishness and morbidly sensitive by indulgence, contend for the mastery. "The wicked are like the troubled sea when it cannot rest, whose waters cast up mire and dirt. There is no peace, saith my God, to the wicked."

It is of real freedom that Augustine says: "It is only a life in God which is truly a life of freedom; then only is man free when he gives himself up, not only to the thought and idea of God, but to God himself as his creating and molding strength; that God may be the all-working and all-moving power within him. Give what thou commandest and command what thou wilt." It is of this freedom only that Fichte's words are true: "One must pass his life upon some idea; and that life only which is molded by the idea is truly a life of freedom." It is only of real freedom that the theological teaching is true that man lost his freedom in the Fall. When in the writings of theologians, modern as well as ancient, we read that by sin man has lost freedom or free-will, we are not to understand them as teaching that he has lost his free agency and moral responsibility, but only his Real Freedom. It is to be lamented that the word freedom is often used in this meaning without any intimation of its distinction from moral freedom. And it must be admitted that in many cases the theologians themselves had not discriminated between them in their own minds and seem entirely unaware of the difference. In fact we look in vain for any clear exposition of the freedom of the will as the basis of moral responsibility and any exact and consistent setting forth of doctrines consequent on it, until the comparatively recent periods of modern thought. The fact of free agency and moral responsibility was assumed in the earlier theology; but the lack of exact definition and discrimination opened the way for affirmations of the loss of freedom by sin which, while true only of real freedom, seem to affirm the loss of free agency itself. Dr. Dorner and some other theologians of the present day have not cleared their thinking from this ambiguity.

The fourth kind of freedom is formal freedom. It denotes the state of the will antecedent to its first choice and to the acquiring of any moral character. It is the characterless will. Formal freedom must necessarily be presupposed as existing before any moral action or character. The will must exist before it acts. And before it has acted at all it must be entirely undetermined and characterless. This is the liberty of indifference, which has no historical existence except in the time when the will exists antecedent to any choice. With its first choice the will determines itself and thenceforth has a character.

Formal freedom is not essential to moral agency and responsibility any further than as necessarily presupposed antecedent to all choice. The theory advanced by some that liberty of indifference antecedent to every voluntary act is essential to freedom in the act, is contrary alike to consciousness and reason, to the observed action and history of man, to sound ethics and to good morals.

No person remembers his first act of will so as to identify it. So far as memory reaches, every man knows himself as having already determined, while always conscious of perfect freedom in the determination. Formal freedom is recognized only as a presupposition necessary in thought. It is the *point d'appui* on which our thought respecting moral action and character necessarily rests.

§ 71. The Influence of Motives.

We must now consider what is the influence of motives on the determinations of the will; or, what is the nature of moral influence. And here, as in other parts of the subject, the progress of psychology gives clearness and precision of thought where in the old controversies were only confusion and error, and carries us beyond some of the questions which were long the themes of fruitless debate. It should be noticed, also, that the fact of free-agency has already been established and is not now under debate. In the present discussion the fact of moral freedom is admitted on both sides. The question is, between believers in free agency, as to the influence of motives on the free determinations of the will. If I show that the answers to this question by some Christian theologians logically involve the denial of moral freedom, I must not be misunderstood as charging them with intending to deny and disprove it.

I. The only motives to voluntary action are the natural and the rational sensibilities or feelings. These are in the constitution of man the only excitants or impellents to action. External circumstances and agents are not motives. They can influence the will only through the feelings which they occasion. Knowledge is presupposed in a determination; a determination is possible only in the light of intelligence. But the knowledge can influence the will only through the feelings which it occasions. It is often said that intellectual preaching is dry and ineffective. The reason is that the preacher addresses the intellect alone and awakens in his hearers no motives except their interest in getting knowledge of the subject discussed. A sermon is designed to quicken to right action and character, and in order to be effective must quicken the motives which move men to duty and deter them from unworthy and wrong action in the conduct of life. On the contrary it is often said that an advocate by appealing to the

feelings of the jury misleads them to a wrong verdict. The one object of a jury is to give an intellectual decision according to the facts; and their interest in knowing the facts is the one motive which should move them. Knowledge of the truth is essential to right action, but in itself it cannot move a man to right action. That is possible only through the feelings which, as man is constituted, incite or impel to right action.

II. The motive is not the efficient cause of the determinations of the will. The will is the cause of its own determinations. And since the will is only a name of the rational person considered as capable of determining, the rational person or free agent is the cause of his own determinations.

The will, however, is an agent-cause of its own determinations, not a transitive cause. The will is the agent that acts. The determination is not caused by a causative act intermediate between the will and the determination; the determination is the act of the will. This immediacy is characteristic of personal acts. If then we distinguish between an agent-cause and a transitive cause, the agent is the cause of its own acts, but not by an intermediate causative act.

The younger Edwards says: "It is no more possible or conceivable that we should cause all our own volitions than that all men should beget themselves. . . . The most of our opponents hold that we are the efficient causes of our own volitions, and that in this our liberty consists."* The doctrine of the self-determining power of the will, controverted by the two Edwardses, was the doctrine that the will is the cause of its own determinations. President Edwards argued that the will cannot cause its own determination, because it can cause it only by an intermediate causal act which would itself be a determination; and thus the supposition of self-determination would involve an infinite series of antecedent determinations. He further argued that the determination must be caused by something, otherwise it would be an effect without a cause; and since it cannot be caused by the will it must be caused by the motive: "It is that motive, which as it stands in the view of the mind is the strongest, that determines the will." On the contrary, Dr. West saw no way to defend his doctrine of self-determination except by contending that a determination of the will is not an effect and has no cause.

If we recognize the distinction between an agent and a transitive cause, and admit that a man is the doer of his own deeds, the question at issue in this controversy no longer arises and the controversy itself is left among the rubbish of the past with only an historical interest.

Sir William Hamilton, accepting Kant's antinomies of reason, finds

* Works. Vol. I., pp. 324, 325. *Liberty and Necessity*: Chap. ii.

an antinomy between freedom and necessity. He says that free-will is inconceivable because it would imply that a determination of free-will is an event without a cause; and necessity is equally inconceivable because, denying the possibility of a real agent that causes his own action, it involves the assertion of an infinite series of causes; every event must be caused by a preceding causal act which is itself an event, and so on without limit. Here Hamilton argues in accordance with the fundamental principles of his Philosophy of the Conditioned. Both necessity and free-will are inconceivable; they are contradictories; one must be true. Then since consciousness testifies to free-will we believe the testimony. We know that we are free, but it is inconceivable *how* we are free.* So Prof. Jevons says: "It is in vain to attempt to reconcile this doctrine (of free will) with that of an intuitive belief in causation."† Other recent philosophers have held the same view. This conception that a free choice is uncaused and therefore inconceivable rests on Kant's doctrine of the antinomies of reason. I have already shown that these are apparent and not real. And the same is true of this alleged antinomy of necessity and freedom. If the will is not the cause of its own determinations, in other words, if the will is not the agent that determines, then the existence of a personal being is impossible; for free-will is of the essence of personality. Thus these philosophers are logically required to deny free-will and moral responsibility. Yet in spite of the logical demands of their principles they still believe in free-will. Their reasoning rests logically on the assumption that the existence of a free agent is inconceivable and impossible as involving events without any cause. Once admit that the existence of a free agent is conceivable and possible, and the antinomy is dissolved and the objection disappears. And this existence of a free-will is conceivable and possible and also known in consciousness, if it is true that I am the agent in my own determinations and the doer of my own deeds.

III. The motive does not determine the will to choose this rather than that. It may be admitted that the person willing is the cause of the choice or volition; he is the agent that chooses and wills. And yet it may be urged that a motive determines him to choose this rather than that. But this is impossible, for the gist of a determination is the determination of this rather than that as an object of action. The determination by the will includes the whole action and leaves no place for a determination by the motive. If the motive determine the man to choose this rather than that, then the will does not deter

* Hamilton's Edition of Reid's Works: p. 602, note.

† Principles of Science: p. 223.

mine; man necessarily follows his strongest impulse, and has no will other than that of the brutes. And since feelings are called into exercise largely by external things, man's action, to that extent, would be the necessary effect of external forces acting on him.

IV. The action of motives on the will may be called influence; by this name the action of motives may be distinguished both from causal efficiency and from determination. The motives do not cause the will to determine this way rather than that; they do not determine it to determine; but they influence it by incitation to act, by impulse towards this rather than that, by appetites and desires, by affections, affinities and repulsions, by scientific, moral, æsthetic, prudential and religious feelings. These belong to the constitution. They move man to action. They interest him in objects of pursuit. Without them man would be but as a log floating in the water, desiring nothing, seeking nothing, interested in nothing, moved only by wind and wave and current. Motives, therefore, are prerequisites to the possibility of a determination; for without them man would have nothing to determine. But the motives do not cause the determination nor decide what it shall be. They merely incite and impel. They influence the man. The determination of object and action amid all these motives is the act of the will—a simple act, incapable of analytical definition. What it is, we know only in our own consciousness of choosing and willing. In the light of reason man rises above his natural impulses and all his motives, surveys and compares them and their objects, and determines. It is man's assertion in action of his own personality and superiority to nature; in the determination of the will he takes command of himself:

“Unless above himself he can erect himself,
How poor a thing is man.”

A person exerts moral influence on another only by arousing feelings which incite and impel. This may be done by presenting truth to the intellect; but not merely by that, as some theorists suppose. Feelings are communicated from one person to another by sympathy. Laughter and tears, cheerfulness and gloom, calmness and agitation, courage and fear pass from person to person by a sort of contagion. The presence of a crowd of people multiplies the power of eloquence. A loving heart adds persuasiveness to words. Moral influence goes out from music, from a commanding presence, from a magnetic personality. Enthusiasm kindles enthusiasm. The power of inspiration of a successful educator or speaker or leader is not merely the power of imparting truth to the intellect, but of rousing the motives which impel to the work in hand.

And this is as far in the way of moral influence as man can go. He can come to the confines of another's being and throw in his persuasions; he can instruct the intellect and arouse the feelings. But he cannot pass within those confines to determine and act. In the inviolable solitude of his own personality every man determines his ends and actions for himself.

Influence differs from physical force both in the objects related and in the nature of the relation. A bat and the ball which is struck by it are different in kind from a motive and a will; and the force imparted to the ball by the stroke which puts it in motion is different from the incitement or impulse of a motive. Persons sometimes speak of coercing the will. But force cannot act directly on the will; it can reach it only as it excites feeling. Force has no relevancy to the will. To speak of coercing the will is to use words without meaning. And this is not altered by the fact that molecular motion of the brain is coincident with feeling and willing; because motion cannot be identified with the phenomena of consciousness, nor transformed into them. This will be shown hereafter.

In the more intelligent brutes, appetites, desires and affections are apparently the same in kind with the natural appetites, desires and affections in man. The difference here is in the different constitution of man. As endowed with reason he is the subject of rational sensibilities inciting to action in spheres entirely closed to the brute; and he is able to compare all motives and their objects in the light of rational truths, and of moral law, and of ideals of perfection, and of good estimated by reason as of true worth, and of his relations to God. Thus he is able to rise above his nature and determine his ends and his actions. The motives incite, but they do not determine. The brute, on the other hand, is determined by the impulses of nature; it refrains from following an impulse only when impelled otherwise by a stronger impulse. A brute's ends and actions are determined for it in its nature; a man's ends and actions are determined by him in his free-will. The strongest impulse is determinant in the brute; it is not determinant in the man.

If, as some insist, brutes have reason and will the same in kind with man, that would not prove that man sinks to the brute, but only that brutes are elevated to the man. Brutes would then be moral agents, responsible for their actions and having personal rights as members of society. The question of universal suffrage would at once acquire a new significance. And a new reformatory movement would become necessary against the buying, selling and enslaving of beings, who, as endowed with reason and free-will, are persons in the image of God.

V. The determinations of the will are always made under the influence of motives.

This is a necessary inference from the positions already attained. The action of the will presupposes causal powers to be exerted and directed, and constitutional impulses of various kinds. Without these there can be no determination, for there is nothing to be determined. There cannot even be any action, for there is no incitement or motive to action.

And this accords with consciousness. Whenever we act we are conscious of some motive inciting to the action. It is only by presenting motives that we try to influence others. We never expect a man to act without a motive.

Some controversialists, opposing theories of the influence of motives supposed to be incompatible with freedom, have gone to the extreme of denying that motives have any influence on the determinations of the will. Prof. Henry P. Tappan says: The will "is a conscious self-moving power which may obey reason in opposition to passion, or passion in opposition to reason, or both in their harmonious union; lastly, which may act in the indifference of all, that is, without reference to reason or passion." "The will in its utmost simplicity is pure power." If we ask why it determines this way rather than that, it "neither admits nor requires any other explanation than this, that the will has power to do one or the other." He also regards the indifference of the will as essential to its freedom. The will "is a power indifferent to the agreeableness or disagreeableness of objects . . . indifferent to the true and the right, to the false and the wrong. . . . From our very definition of the will it cannot be otherwise than indifferent. When it determines exclusively of both reason and sensitivity, it of course must retain in the action the indifference which it possessed before the action; but this is no less true when it determines in the direction of the reason or sensitivity. . . . The will considered in its entire simplicity knows only the *nisus* of power.*"

Those who hold these doctrines imperil the defence of freedom. If moral freedom is possible only if the will can act without any motive and even contrary to all motives, and only if the will is in complete indifference, the consciousness and common sense of men will teach them that free will on these conditions does not exist. And in representing the will as power only, it is brought to the level of physical force, which also is power only. Why does falling water move a water-wheel, or the elastic steam drive an engine? Because it has power to do so, power acting without motives and in entire indifference. How, then, does will-power differ from water-power or steam-

* Review of Edwards on the Will: pp. 226, 227, 244, 245, 247, 248.

power? On the contrary it is of the essence of will that it is rational power or energizing reason which determines its own end and exertions; and its choice is in its essence an elective preference and not an action in indifference. In fact determination under the influence of motives is characteristic of rationality. Action without motives or contrary to all motives would be irrational action. Instead of being free action it would be more like the convulsions of epilepsy.

VI. The common formulas or laws of the uniform influence of motives on the determination of the will are ambiguous and worthless.

One formula supposed to enunciate the law of the uniform action of motives is this: *The determination of the will is always as the strongest motive.* If this means that the determination is always as the motive, the object of which reason approves as of the highest worth, it is notoriously untrue. All sin is determination contrary to the mandate of reason. If it means that the determination is always accordant with the motive which is in the consciousness strongest in intensity, it is not true. A man who has been enslaved by an appetite for tobacco or opium or alcoholic drink may resist it in obedience to reason and conscience, and yet in his desperate struggle he is vividly conscious that the appetite is strong and the impulse to duty weak. If it were true that man always determines according to the motive which is in this sense the strongest, he would be controlled as the brutes are by nature and would have no free-will. If the formula implies that we ascertain which the strongest motive was by observing to which the will consented, the formula has no significance and is equivalent to the identical proposition, "The will always determines as it does determine."

A second form of stating the law is this: *The determination of the will is always as the greatest apparent good.* This springs from the Hedonistic ethics and assumes that happiness is the ultimate motive of all action. And it involves just the same ambiguity as was found in the first statement. If it means that men always choose that which in the light of intelligence they estimate as the greatest good, it is not true. If it means that they always choose that which seems to insure the greatest present gratification, it is not true; and if it were true man would not be a free agent. And if we ascertain what seemed the greatest good by observing the determination, the law has no significance further than the identical proposition that a man always determines as he does determine.

A third form of stating the law is this: *The determination of the will is always as the last dictate of the understanding.* This leaves out altogether the sensibilities which are the only real motives, and connects the determinations immediately with the intellect. It is also

untrue because men often determine contrary to the dictate of the understanding and in accordance with the incitation of feeling.

VII. The uniformity of human action cannot be explained by any law of the uniform influence of motives on the will. Another factor is concerned in this uniformity; it is the character in the will. By its choice the will forms in itself a character; and by action in accordance with the choice, it confirms and develops the character. This must be recognized in explaining the uniformity of human action. The attempt to explain it by some law of the uniform influence of motives assumes that the will is always characterless. Writers on the will who attempt to explain the uniformity of human action in this way, have much to say about the necessity of finding the laws of the will. But in fact they are seeking for a law of the will which shall be only a necessary uniform sequence of nature; should they succeed they would only prove that the determinations of the will are a part of the course of nature and subject to the *dictum necessitatis*. This would prove that personal beings do not exist and that nature is all. The real law to the determinations of the will is the moral law which declares the ends to which rational beings ought to direct their energies and the principles which ought to guide them in their actions. If personal beings exist they must at some point rise above the fixed course and uniform sequences of nature and find themselves under obligation to conform their free action to the truths, laws, ideals and ends of reason.

✓ § 72. Character in the Will.

I. A choice being an abiding determination of the end or object of action, constitutes character in the will. A will that has made a choice therein has a character. As an abiding elective preference of the end or object of action it is character. As choice it is always active and free. It is not nature; it is not sensibility stimulated involuntarily from without. It is elective preference or choice. It may not always be present in consciousness. But whenever it comes to the person's attention he is conscious that it is his choice and conscious that in it he is free.

II. The determination of the will exerts an influence on subsequent determinations.

A choice exerts an influence on subsequent choices. For example, in choosing learning as an object of pursuit in life in preference to wealth, that choice carries in it an influence on a multitude of subordinate choices. So Agassiz, when asked to turn aside to a lucrative use of his knowledge in the service of a great business establishment, declined, saying that he had not time to get rich.

The resolutions or immanent volitions to act exert forwards a similar but less powerful influence. A man plans his day's work; resolves what he will do in each hour of the day. He may become a slave to his plan, or be entangled and hindered by its too great minuteness or its imperfect adjustments to time and strength and unanticipated avocations. But by a resolution or plan he may determine his course of action for the next day or for a series of days.

Even the executive or exertive volitions influence the subsequent determinations. They confirm the choice. By persisting under all temptations in honest action one confirms his honest character. And the repetition of action forms habit which is a facility of action and a proclivity to perform it. The acquired facility is exemplified in learning to handle tools or to play on an instrument. The acquired proclivity is exemplified in the difficulty of breaking up a habit. The action sometimes becomes secondarily automatic and is done unconsciously. Hence it is said, at first a man carries his habits, afterwards his habits carry him.

Choices and volitions also react on the sensibilities and either stimulate or deaden them. The appetite for alcoholic liquors or opium is strengthened by gratifying and deadened by resisting it. Ruskin says the highest happiness is found in seeing the corn grow. He means that a man realizes the greatest happiness when he keeps himself fresh to the enjoyment of simple pleasures. A passion for gambling, for excitement of any kind, grows by gratification and necessitates stronger and stronger stimulus, till the fevered soul becomes incapable of the common joys of healthy life. Men can educate themselves even to the ferocity of enjoying cock-fights, the prize-fights of pugilistic bullies, bull-fights and gladiatorial shows. In like manner by right action they can increase the delicacy of their moral discernment, their sensitiveness to good impulses, and the power of all motives to virtue.

In this reaction of the voluntary determinations on the sensibilities a man indirectly modifies the motives under which he acts. Thus the motives which influence a person of mature age are largely the product of his own previous action.

III. Voluntary action is a continual formation or modification of character. We have seen that volitional action is an expression of character. We now see that it is also continuously a forming or modifying of character. Every subordinate choice and volitional act confirms or in some way modifies the existing character. "Every man hews his own statue; builds himself." Every act is a blow of the mallet on the shaping chisel. Thus man's life is a unity. What he is now is the outgrowth of what he has been.

"The child is father of the man;
And I could wish my days to be
Linked each to each in natural piety."

IV. Since character is in the will and is primarily the supreme choice, man is always free to change his character by a new and contrary supreme choice. If his supreme choice is of self he is free to choose God and his neighbor as the supreme object of trust and service. If he chooses thus, the new choice is the primary element of a new character; but it is not a new character fully developed and confirmed. There still remains in him all which he has builded into himself by his action in accordance with his former supreme choice: the training and storing of his intellect well or ill; the morbid excitability or deadness of his sensibilities; the motives that influence his determinations now constituted as all his life long he has been forming and modifying them by his own action; and the habits, some of them masterful habits, which he has himself created. Under the sway of his new choice he must by continuous right action build himself up in a character of Christian faith and love, and in so doing tear out all the evil which he had built into the whole structure of his character in his previous life.

It is evident, also, that, although while his former character remained he was free to choose God, yet that character itself being the dominant choice of his will and having with the influence of continuous action formed the intellect and sensibilities into accord with itself, must be a powerful hindrance to a fundamental change by a new and contrary choice, and gives small ground to expect that the man left to himself will ever make the change.

V. After the will has acquired a character by choice, its determinations are not transitions from complete indetermination or indifference, but are more or less the expressions of character already formed and of choices and determinations already made. A person who goes to his business at a stated hour every morning does not make a new complete determination every time, but acts according to choices and purposes of long standing. Nor does he determine anew every day the manner in which he does his business, whether honorably or dishonorably, courteously or rudely, carefully or carelessly, energetically or lazily. In his manner of acting he expresses a character already formed by previous voluntary action. Some acts seem less closely connected with the prevailing bent of the character than others. But it would be difficult to find an act of any person after infancy, not influenced in some degree, directly or indirectly, by previous determinations of will.

It is sometimes objected to free-will that a person often follows impulse thoughtlessly. It is asked how in that case there can have

been comparison and choice. It is sufficient to answer that he is not divested of his rationality at any moment, and, if he follows impulse without deliberation, it is by the free determination of his will not to deliberate. It is his free refusal to consider what reason would require. The same is implied in common language when it is said that the man has given himself up to the control of appetite or passion. But there is also another answer, that the spontaneous action without deliberation is often simply the expression of a choice or purpose already made and of a character already formed.

The theory that indifference is essential to freedom necessarily implies that the will never acquires a character; that voluntary action is atomistic, every act disintegrated from every other; and that character, if acquired, would be incompatible with freedom, because it would be essential to freedom that the will be always indifferent. A man may have been scrupulously honest fifty years, and yet, if he is a free agent, his will is in indifference, and the determination to cheat or steal is at every moment just as easy as to determine to do right. Persistence of choice and of character in the will is thus made incompatible with freedom; and God who is eternally love cannot be free. And this conclusion not a few advocates of this false theory of freedom have avowed and defended. But in truth the persistence and strength of a choice has nothing to do with the freedom of the will. The freedom lies in the constitution of a personal being and the essential quality of determination, whether the determination persist but for a moment or through endless existence. A choice, however long it persists, is always a choice of the will, not an involuntary excitement of the sensibilities; it is always the free and active determination by the will of the end or object of action. And under the influence of all sensibilities, however modified by previous voluntary action, the will determines.

§ 73. The Uniformity of Human Action.

I. There is a uniformity in human action and a consequent possibility of foreseeing it, sufficient to be the basis of confidence and the determination of action between man and man. No one expects that a friend whom he has known for years will betray him to-morrow, or that a person long known to be honest will all at once steal a watch or defraud a widow of funds in his hands as her trustee. Foresight of human action is the prerequisite of far-reaching statesmanship and wise legislation. The uniformity of human action is the basis of the confidence of man in man which makes the transaction of business and indeed all domestic and social life possible. The homeliest and commonest transactions with men every day imply the confidence that they will act in the immediate future as they have been acting in the past.

Tables of statistics, also, are said to establish laws of averages respecting the most uncertain of human actions: a certain percentage of letters put in the post-office will be misdirected; suicides and murders from year to year will bear the same ratio to the population.

II. These laws of averages are too indefinite to be the basis of any science of the uniformity of human action.

At the most they determine nothing as to individual action. A certain number in a thousand misdirect letters or commit murders in a year. But this does not enable any one to foresee that a particular person will misdirect a letter or commit a murder next year. It would hardly be accepted as science to say that six per cent. of all unsupported stones will fall, while it remains impossible to designate the individual stones which will fall.

The laws of averages do not determine anything even as to communities. The average that is true of a population of millions is not true of the hundreds and the thousands; nor is any line of demarkation established defining how great the population in question must be. It is asserted, for example, that in the United States the murders annually will be a specified number in a thousand. But I know a township settled more than a hundred years ago and now containing some five thousand inhabitants, in which no murder was ever known to be committed. Of what scientific significance is an average true of masses of millions, when there is no certainty that among the thousands in any particular town or county there will be one murder in a century? Also, the annual average of crimes in New York city is greater than the average in an equal population in any contiguous rural counties in the State. And the average percentage of crimes in the last decade may be widely different from the percentage in the same territory in the first decade of the century. Cosmic agencies do not change. Why then does human action vary?

And the same outward actions do not have the same significance as revealing the springs and laws of human action. The law distinguishes various kinds of homicide. A murder incited by covetousness is of widely different significance from a murder incited by lust or revenge, and must be the result of widely different influences. The two cannot be grouped together as of the same import or as proving that man acts necessarily under external agencies. On similar grounds Mr. R. A. Proctor has pointed out the insufficiency of the argument from statistics supposed to prove that marriage is conducive to longevity.

Statistical averages have sometimes been set forth as disproving free-will. They seem to prove just the contrary, that there are elements concerned in human action making it impossible to reduce it under exact scientific laws of nature.

It may be added that in some cases we may question the correctness of the statistics, or else the fairness of the grouping and interpreting of the facts. Quételet, estimating the probability of the birth of males or females, says that once in a certain number of times we shall find the births of a given number of males happening successively. To ascertain the relative frequency of such an event he does not consult the registers of births, but resorts to a method which he says is "more expeditious and quite as conclusive;" he puts forty black and forty white balls in a bag and notes the succession of colors as he draws them out. One who is not an anthropologist may raise the question whether drawing balls from a bag involves all the conditions which influence the birth of children. It may be admitted that Mr. Buckle presents facts in discussing, in the second volume of his history, the influence of Christianity and the Christian ministry in Scotland. But every one acquainted with the history of that country knows that he has presented but a part of the facts and grouped them so as to falsify the real history. It is as if one should collect from the daily papers the accounts of all the crimes in New York city for a year and give these alone with comments arguing that these fully represent the civilization of that city.

III. The uniformity actually existing in human action is compatible with freedom.

Character itself is primarily a choice. Yet it is a choice which persists, which modifies the state of the sensibilities and the intellect, and both directly and indirectly influences the subsequent determinations. The choice itself is character and thus is the basis of uniformity of action. This gives confidence in character. A man long known to be honest, truthful, beneficent, high-minded, is trusted accordingly. He is expected to continue to be what he has been. In public life or private it is character which tells. The same is true of masses of men. One could have predicted the contrasted action of the Puritans and the Cavaliers in Great Britain in the seventeenth century, and of the Dutch Protestants and the Spanish Catholics in the days of Philip II. and the Duke of Alva. But the uniformity of action had its basis chiefly in character.

Thus the free-will itself is a basis of the uniformity of human action. The entire conformity of will with reason would involve uniform right character and action. This uniformity and unchangeableness of right character exists in the highest degree in God, who is eternal and never-changing love. But the uniformity which is involved in right character is compatible with freedom, for it includes freedom in its essence.

Uniformity of action among men arises in part from their common constitution. When Mungo Park came one evening weary and ill to

an African village, some of the negro women ministered to him, chanting a ditty the refrain of which as translated by him was: "Let us pity the poor white man; he has no mother to bring him milk; no wife to grind him corn." Men everywhere and in all ages have the common characteristics of human nature. They think, and feel, and act as men.

"Skins may differ, but affection
Dwells in white and black the same."

Uniformity of action among men arises, also, from the action of the same outward agencies on their common human nature. If an Esquimaux goes to the torrid zone he will cease to wear furs and to eat blubber. This is no argument against free-will; free-will does not control the weather, nor, directly and immediately, its effect on the physical system. Yet free-will does not therefore cease to act; for if the Esquimaux did not leave off his furs under the heat he would show that he was not a reasonable being. His arctic dog could not by an act of will throw off his hair nor adjust himself to meet the exigencies of the climate. Free-will does not create man's physical organization and strength, nor the action of cosmic forces on him. It exerts his physical and intellectual power and directs it to chosen ends. It determines him to exertion by which he subdues nature and makes it serve him; and while subduing nature he develops himself.

Therefore the uniformity of man's action as it actually exists is no argument against free-will.

§ 74. Sociology and Free-Will.

A science of Sociology consistent with free-will is possible.

I. An attempted sociology, founded on the denial of free-will, cannot be science. It has no right to call itself an inductive or empirical science; for it begins by arbitrarily denying or ignoring the most fundamental, important and certain of all the facts pertaining to humanity: free-will and personality, moral responsibility and character, and religion. It assumes some theory of knowledge which limits it to objects of sense; it assumes that man's action and character are caused by the same chemical and mechanical forces which cause the combinations and motions of bodies, and in accordance with the same chemical and mechanical laws. A sociology, which thus starts in dogmatic assumption refusing to take note of facts patent to the universal consciousness of man, must be vitiated with defect and error throughout, and its propagation and reception must hinder human progress and benumb the noblest powers of man. For example, an eminent professor of Social Science says: "It is incontestably plain that a man who accepts the dogmas about social living which are imposed by the

authority of any religion must regard the subject of right social living as settled and closed, and he cannot enter on any investigation the first groundwork of which would be doubt of the authority which he recognizes as final. . . . The human race has never done anything else but struggle with the problem of social welfare. That struggle embraces all minor problems which occupy human attention here, save those of religion, which reaches beyond this world and finds its objects beyond this life." According to the latest conclusions of anthropology religion has existed among all races and tribes of men. It is notorious, also, that instead of pertaining to the other world alone, it claims to regulate life to the deepest springs of character, and has been one of the most powerful factors in human history. It is itself a great sociological fact which all true sociology must recognize. As to the intimation that a belief in any religion disqualifies the believer for a candid investigation of sociology, we may ask, in view of the almost universal existence of religion, Who are to be the candid sociologists? Must all sociologists be atheists? And even an atheist, if he has no religion, is certainly a metaphysician and a theologian; and, as Comte has somewhere said, the most illogical of them all, because he busies himself about an insolvable problem and gives its least plausible solution. And the objection against religion is equally pertinent against morality. The law of universal love, the first principles of truthfulness, justice and benevolence are settled beyond dispute.

"The primal duties shine aloft like stars."

Do right moral convictions and character disqualify a man for the candid study of sociology? This writer's assertion respecting religion sweeps to the conclusion that fixed moral and religious convictions are incompatible with candid investigation. If a man would suffer death rather than do a dishonorable deed, that character would make him incompetent for a candid investigation of what constitutes the welfare of society and what are the most effective methods of promoting it. The fact is that a virtuous man's ineradicable conviction that the law of love is supreme is entirely consistent with continual progress in the knowledge of the significance and applications of the law and of the best methods of making its control in society effectual; it is consistent also with the correction and improvement of his own character, and his advance in the delicacy of his own moral discernment as well as in moral power. So the Christian's ineradicable faith in God is entirely consistent with increasing knowledge of him and of all reality, and of the applications of all known truth in promoting the welfare of man. There is no more inconsistency here than there is between an astron-

mer's ineradicable belief in the law of gravitation and the revolution of the earth around the sun, and his correction of old errors and acquisition of new astronomical knowledge from year to year through his whole life.

II. Sociology will never reduce human action to the exactness of mechanical laws. This is impossible for the simple reason that man is not a machine but a person. Free-will is a power above mechanism. The law to personal free-agents is the moral law, the law of love; not the uniform sequences of mechanism and chemical affinity. And it is inherent in the very essence of free-will that it can disobey law. Hence the actions of particular persons or communities cannot be foretold with unerring accuracy. The man who was a blasphemer in the morning may be a penitent at night. The young man who till yesterday has abstained from intoxicating drink may drink to drunkenness to-day. A community quiet under despotism this year may be in armed revolution the next. In the Duke of Alva's time a Protestant fleeing from an officer of the Inquisition crossed a frozen lake. His pursuer broke through the ice and was likely to be drowned; the fugitive, hearing his cries, returned and rescued him from death. Then the officer seized the unarmed and defenceless man and delivered him up to the Inquisition. No person, probably, would have predicted that a man would make this return to one who had voluntarily come back to him and saved him from death. In all calculations as to the probability of human action, the moral character of a person or a community, acquired by free choice, must be taken into account. The very same agencies and influences which move one person or community to righteous and benevolent action will move a person or community of different moral character to unrighteous and selfish action.

III. There is a sphere for a sociology compatible with free-will in the uniformity actually found in human action and arising not merely from the common constitution and common outward conditions of men, but also from free choice itself as it forms moral character, determines the effect of outward agencies on the action, modifies the constitutional powers and susceptibilities, and guides and directs their development.

By the study of man as he is and has been, sociology may ascertain what ends it is possible to attain for his welfare and what are impossible from the limitations of his being; what welfare can be realized for him directly by his own free choice, and what can be realized only by a gradual amelioration of his condition through a larger knowledge and control of the resources of nature and a further training and development of the man. It may open the way to wiser legislation and statesmanship by disclosing the immediate or proximate ends to be

aimed at in human progress, the principles which must guide and the methods which are most effective in attaining those ends.

In a paper read before the American Social Science Association in 1869, General Garfield said: "Society is an organism whose elements and forces conform to laws as constant and pervasive as those which govern the material universe, and the study of these laws will enable man to ameliorate his condition, to emancipate himself from the cruel dominion of superstition and from countless evils which were once thought beyond his control, and will make him the master, rather than the slave of nature." This is true, with the explanation that society is subject both to the laws of nature and to the moral law. As implicated in nature man is subject to the laws and course of nature; in heredity and all physiological and physical processes nature acts through his physical organization as really as through the trees. Here is one sphere of sociology in studying the physical and physiological laws of man's nature and applying them to improve his physical condition, constitution and development. But as a rational free-agent man is above the fixed course of nature; he determines the direction and exertion of his energies and so becomes, as Gen. Garfield says, "the master rather than the slave of nature." As rational and free, the law to which he is subject is the moral law of love. This does not, like a law of nature, declare the uniform fact that he does conform to the law, but only his obligation or duty, while he is free to obey or disobey. Here is another and higher sphere of sociology, in investigating the dependence of the prosperity and progress of society on the development of man's moral and spiritual capacities and on his conformity to the law of love to God and man, and in studying the motives and the methods of presenting them most influential in inducing men to live right and so to realize the highest possibilities of their being. Here, in entire consistency with man's freedom, sociology may investigate what the well-being of the individual and of society is and what are the wise methods of promoting it. All questions of reform and progress and of the methods of promoting them are within its sphere: as, the legitimate sphere of legislation in promoting good morals; the penal legislation most effective to protect society from crime; the legislation which will present the most influential motives to stimulate industry and to insure the largest development of the resources of the country. For instance, sociology may ascertain in respect to protection or free-trade whether legislation should follow the principle that the prosperity of a nation is promoted by the peaceful prosperity of other nations, or the contrary principle that the prosperity of a nation is hindered by the prosperity of other nations. Whichever principle is found to be sustained by facts, sociology will proceed to ascertain what methods are most effective in applying the principle.

In such studies, however, the sociologist must not refuse to take notice of the principles of morals and religion, nor dismiss with a sneer as "sentimentalists" and "doctrinaires" those who are trying to advance society towards conformity with these principles as essential to its true welfare. Recognizing morality and religion as great factors in human history, sociology must ascertain by what errors and misapplications they have been perverted from their legitimate influence, and by what methods they can be made most effective in eradicating vice and purifying and elevating the moral and spiritual tone of society. The education of the young, for example, is a topic for sociological investigation. But the question of moral and religious instruction is inseparable from the institution of public schools. The restriction of education in the public schools to intellectual instruction, excluding the teaching of morals as founded in reverence for God and consisting in love to God and our neighbor as commanded by God's law, is a very simple way of settling the question. It is as unscientific and superficial as it is simple, and if ever generally carried strictly into practice, will prove itself a fatal error.

It has been found in the progress of the Christian nations, which for ages have been the only progressive ones, that the principles which society has gradually come to apply in the development of its civilization, are the same which are taught in the life and teaching of Christ. The dignity and worth of a man by virtue of his personality, or, as we say, his manhood; the consequent sacredness of his rights; the rights of the individual in society as against despotic government, and the duties of society, however governed, to the individual; these and kindred truths have been powers in the political progress of the three last centuries. Whatever speculative recognition of them may be found here and there among the greatest heathen writers, it is indisputably Christianity which has made them practical powers in the creation of modern civilization. It was the revival of Christianity in the Protestant Reformation, going back beyond accumulated traditions and corruptions to the primitive principles and power of Christianity, which initiated this great movement and has given it its vitality. The principles which are to solve the social problems now urgent, lie waiting their application in the Christian law of service: "Whosoever would become great among you shall be your minister; and whosoever would be first among you shall be your servant; even as the Son of man came not to be ministered unto, but to minister, and to give his life a ransom for many;"—Greatness *for* service; Greatness *by* service. And this principle our Lord announces explicitly as the principle of a new and Christian civilization: "Ye know that the rulers of the Gentiles lord it over them, and their great ones exercise authority over them. Not so shall it be among you."

Thus the progress of Christian civilization has been the slow but brightening revelation of the gospel of Christ as "good tidings of great joy, which shall be to all the people;" "The poor have good tidings preached to them."

"Let knowledge grow from more to more,
But more of reverence in us dwell;
That mind and soul according well,
May make one music as before,
But vaster."

CHAPTER XVI.

PERSONALITY.

§ 75. Definitions.

I. A PERSON is a being conscious of self, subsisting in individuality and identity, and endowed with intuitive reason, rational sensibility and free-will. All beings constitutionally devoid of these characteristics are impersonal.

God alone is self-existent and independent, unconditioned and all-conditioning. Finite persons are always dependent on him; but they are in the image of God as endowed with reason and free-will, and are also in some respects self-conditioning.

Hamilton remarks that while physical action is conditioned in space and time, the action of the human mind is not conditioned in space, but in consciousness and time. But because the mind is conscious of itself in all its acts and its consciousness is spontaneous and entirely within itself, it may be said to be, in this respect, self-conditioning.

A personal being has also intuitive knowledge of rational principles. Thus are opened to him those ultimate realities of reason, the True, the Right, the Perfect and the Good. He is therefore autonomic; the truth that enlightens and the laws that regulate thought and action are within himself. And the Good, which is the end to be acquired for himself, since it consists primarily in his own perfection, is within himself. And to this extent he is self-conditioning.

He also has knowledge of outward things, not as phenomena merely but as real beings, and of their real energies; by his rational intelligence he discovers the scientific principles and laws which regulate nature, and the cosmos or orderly system which it constitutes. In the light of reason he reads in nature the archetypal thoughts which it expresses and the rational ends which it subserves. Thus nature does not so much hem him in with limits as it opens a sphere to his thoughts and reveals to him the grandeur of his own reason.

In his rational sensibilities his being lies open to influences that come on him from the sphere of the spiritual; he becomes conscious of a presence and a power transcending sense and arousing him to interest in truth and right, in perfection and beauty, and in good which

reason estimates as having worth and in comparison with which sensual enjoyment is held of small account.

In his will he is self-directing, self-acting and free. Here also nature, which seemed a restriction, is found to open a sphere of action in which man conquers nature and compelling it to reveal and surrender to him its powers and resources, develops himself and discovers and reveals his own powers.

In all these respects man is self-conditioning. And, as in the enlargement of his knowledge and the development of his powers he comes upon the conditions and limitations of his being, he finds them not ultimately in nature, but rather in his dependence on God and his subjection to his law. Thus the very limitations and conditions of his being reveal his greatness, as subject ultimately only to the supreme and absolute Reason, hedged about only with the truth and laws, the ideas and ends eternal in the divine wisdom and love, and bound within these flaming barriers to be a worker together with God in the universal moral system for the realization of its highest ends.

The component parts of this definition have already been considered and need no further explanation.

II. A Moral Agent is a person considered as under obligation to obey the moral law, with freedom to obey or disobey it, and thus responsible for his action and character as right or wrong. All moral agents are persons. An impersonal being cannot be a moral agent. A dog may neglect every duty required in the moral law; but it cannot be a transgressor of the law, for it is constituted incapable of knowing the law and destitute of the qualities of a free and responsible person.

There may be, however, persons or moral beings who cannot with strict propriety be called moral agents. A new-born infant is properly called a person or moral being, because it has the constitution of a person, though not yet developed into action. So the newly-born whelp of a tiger is properly called a carnivorous animal, though a long time may pass before it becomes capable of eating flesh. Yet this infant can hardly be called with propriety a moral agent until it is capable of the consciousness of moral obligation and of responsibility for its actions.

III. Nature is the whole of impersonal being considered as conditioned in space and time and the subject of continuous transition in the uniform and necessary sequences of cause and effect. Nature is always "becoming;" it is never for two successive moments in the same condition; everything in it acts only as it is acted on, and its necessity not in freedom.

"It must go on creating, changing,
Through endless shapes forever ranging,
And rest we only seem to see."

This continued transition in the necessary and uniform sequences of cause and effect is called the course of nature.

All personal beings are supernatural. By virtue of their personal attributes they are above the uniform course of nature, and act in freedom, not in necessity.

Man, however, is implicated in nature. He is, indeed, an agent-cause. But so also is a molecule or atom if it is endowed with the power of attraction and repulsion or any other inherent power. The molecule reveals its power only as it comes into relation to some other molecule. So man, though endowed with personal attributes, reveals them to himself and others only as he comes into relation to nature, which is the occasion of his exerting his energies and becoming conscious of himself as rational and free. But this does not imply that man's mind is a *tabula rasa*, a blank tablet passively receptive of whatever sensuous impressions may be imprinted on it from without; nor does it imply that the molecule and the human mind are the same in kind.

What man is, is not determined by that which excites him to action, but by the powers which he exercises and reveals when he acts. Power is common both to personal and impersonal beings; and contact with objects in nature is the occasion on which the power both of man and the impersonal thing are brought into action. But in the exercise of their powers the one reveals its impersonality, the other its personality. Man acts in the consciousness of himself as ever one and the same; by virtue of his rationality and his consequent susceptibility to rational motives he is able to direct his energies to any end which he has freely chosen and to call them into action at will. Man's body is itself a part of nature. Muscular contractility and other organic energies are forces of nature. But the man exerts these forces and directs them to his own ends, and through them—hand guided by mind—is able to use other forces of nature and compel them to effect what he has willed and what nature without his intervention would never have effected. These powers in their very essence imply that man is distinct from nature and above it. In the very act of knowing nature and acting on it he distinguishes himself from nature, knows himself above it, and finds in it both the sphere of his rational intelligence and free activity and the resources and powers which he controls to his own service. He is a supernatural being. Lotze says: "The complete survey of the inward experience is the only way to ascertain with what essential qualities the soul fills out its own indivisible unity, which holds the manifold of its inner life together and develops the many-colored manifoldness of its characteristics. We have no other insight 'nto the essence of the soul except what the observed acts of our own

consciousness guarantee; we know what the soul is by what it is able to know, to feel and to do.”*

The Duke of Argyll suggests that man cannot know the supernatural till he has attained an exhaustive knowledge of the natural. If this is so he can never know the supernatural. Conscious individuality and identity, conscious reason and free-will are of the essence of personality. If a man does not know these in his consciousness of himself he can never know them. And personality in its essential significance is supernatural. This very suggestion of searching throughout nature for the supernatural presupposes knowledge of the supernatural.

It must be noted that the word *nature* is often used with other meanings. It is used to denote the constitution of anything, or its essential qualities; we speak of the nature of an alkali or of electricity, the nature of law, of a circle, of syllogistic reasoning, or of God. *Supernatural* is also used to denote the miraculous, the exertion on nature of a power not only supernatural but also superhuman. *Nature* is also used to denote the finite universe, including man; and the *supernatural* is identified with the *absolute* and predicated only of it. Then the difference between the supernatural and the natural becomes precisely the difference between the absolute and the finite. Then it becomes impossible to have any positive knowledge of the supernatural, or of the absolute as a supernatural being; for if man does not know the supernatural in knowing himself, he can never have any positive knowledge of it, nor add anything positive to the idea of the absolute by affirming that it is supernatural. Imagination cannot create an idea the elements of which were never given in intuition. The logical result must be either agnosticism—the absolute as the ground of the universe is unknowable—or monism—the absolute is identical with the universe itself; and, whether the monism be materialistic or pantheistic, in either case the universe, identified with the absolute, contains nothing supernatural. Logically no bridge is left by which thought can pass to the knowledge of the absolute as the personal God. But if personality, as including reason and free-will, is in its essence supernatural, then we know the universe as including both a moral system of persons under moral law and therein supernatural, and a system of impersonal nature under natural law alone; and we may know the absolute being as the Supreme Reason governing the world in wisdom and love; that is, we may know him as the personal God in whose image as rational, free and personal, man exists. The objection that this implies that man would be exempt from the law of cause and effect rests on a misapprehension. The law of cause and effect is a principle of reason and

* Mikrokosmos. Vol. I., pp. 182-184.

law to all finite beings, and is not a mere uniform factual sequence which we call a law of nature; and the free person is not exempt from it, for he is the cause of his own free acts, and himself as finite derives his being from God and depends on him for his existence. But his action is free and is not in the necessary sequences which constitute the course of nature.

IV. A person, considered as distinguished from matter or as hyper-material, is called Spirit.

Our knowledge of person as already defined is clear and positive. All its elements are known within our own consciousness. But when we designate a person as a spirit in distinction from matter, the proposition is liable to be misunderstood.

On the one hand, theology does not deny of the finite spirit all relations to space. The relations of body, of the finite spirit, and of God to space, were respectively designated in the older theology by the Latin adverbs, *circumscriptive*, *definitive* and *repletive*.* By these terms, which Turretin already perceived to be inadequate, theology denied of the finite spirit solidity and divisibility, which are characteristic of bodies, and immensity or omnipresence which is predicable only of God, and affirmed of it a definite form and position in space. So Tenyson:

“Eternal form shall still divide
The eternal soul from all beside.”

It is not essential to spirit that it exist and act separate from matter. All that is essential is that the properties and powers peculiar to a person are not properties and powers of matter; they transcend matter and its forces and cannot be accounted for by them. It is therefore possible that spirit acts in and through a material organization; and if all finite persons thus act it does not prove that they are not spirit. Even God expresses his thought and reveals his glory through nature. Immanent in the universe his power, wisdom and love are continuously revealed in it. In the loom of time he weaves the garment by which we see him. Spirit is the source of power and of the wisdom and love which direct its energies. And it is not inconceivable that the finite spirit, as a subcreative centre of reason and free power, may weave for itself a material vesture, of ethereal texture and from fitly elaborated matter, through which it acts and by which it is revealed. Any power which acts can cause only effects, which as effects are conditioned in space, or time, or consciousness, or quantity, or dependence. Not otherwise can it reveal itself.

* Turretin: *Institutio Theologiæ Elencticæ*; Loc. III., Quæst. ix.

Hence nature is always the symbol and revealer of spirit. As already shown, nature is the sphere in which the human reason and will act, and furnishes resources and agencies for their action. And in it God, always immanent, acts revealing his glory. Matter is not contradictory to spirit, but the object and sphere, the organ and the instrument of its action. The impassable chasm between dead matter and spirit, the irreconcilable antagonism between them, can no longer be found.

On the other hand the word *matter* does not have a fixed and definite meaning. This is partly because the word is used indefinitely; partly because those who define it do not agree in their definitions; and still more because an exact and complete definition must determinately answer questions, both empirical and metaphysical, which man has not at present the means of deciding.

It is idle to use the arguments against materialism founded on what Lange calls, "The old notion of matter as a dead, stark and passive substance." Matter is now regarded as dynamic rather than passive; and the materialism of the present day is founded on the doctrine of the persistence of force. Matter as conceived by the current materialism is that which occupies space and is contained in it and which thus has the properties of solidity, extension, form and position; but it is always in motion; rest is relative only to the particular system to which the apparently resting body belongs. Force is the cause of motion; or, if the phrase is preferred, it is that which is manifested in motion; all force is measurable by motion, the mass and velocity being the factors. The quantity of force, potential and kinetic, is always the same. By the impact of moving bodies force can be communicated and its manifestation transformed into a new mode of motion; but no force can be added to or subtracted from the existing amount. The inertia of matter remains in the fact, as stated by Grove, "that a force cannot originate otherwise than by devolution from some pre-existing force or forces."* Such is matter objectively considered as the current materialism conceives it.

Matter subjectively considered is that which is perceptible by man's senses; or is of such a nature as to be conceivably perceptible by more acute and powerful senses of the same kind. The materialism of the present day is the affirmation that matter and force as above defined are all the reality of which it is possible for man to have knowledge; that they constitute the universe and account for all its changes; that what we call mind and mental phenomena are no exception; and that there is a complete correlation and inter-convertibility of mental phenomena and the physical processes going on in the brain.

* Correlation of Physical Forces: p. 19.

In view of the current dynamic conception of physical phenomena, this materialistic monism is evidently distinguishable from materialism in some of its previous historical forms. But it is the same in its practical issue. In contradiction to this materialistic monism I affirm that the activities of personality, certainly known to us as facts, reveal an agent or power other than and different from matter and the energy which is manifested in motion and measured by it. A person, considered as thus distinguished from matter and its motor-energy, is called spirit.

§ 76. Man is a Personal Being.

Man knows himself to be a person, endowed with rational free-will and all the essential attributes of personality, and, as such, a subject of moral obligation and capable of moral conduct and character. Man knows this with the highest certainty; on the knowledge of this all other knowledge depends for its reality, its continuity, and its unity.

The fact of man's personality has been established in the preceding chapters, and needs no further discussion.

In his personality every man is individual and alone; others can approach the barriers of this solitude and send in intelligence, influence, or sympathy; but no man can scale the barriers into the personality of another to think, or feel, or determine, or act for him, to take his responsibility, or to participate in his consciousness. There is much in every one's consciousness which, even without any purpose or effort to conceal it, is hidden from those most intimate with him.

"Yes; in the sea of life enisled,
With echoing straits between us thrown,
Dotting the shoreless watery wild
We mortal millions live alone.
The islands feel the encasing flow,
And then their endless bounds they know."

And to the same purport is the Hebrew proverb: "If thou be wise thou shalt be wise for thyself; but if thou scornest thou alone shalt bear it."

Whatever difficulties may be involved in the assertion that man is spirit, the fact of his personality stands out in clear, definite and certain knowledge. And because he is a person he is a moral agent and a supernatural being.

§ 77. Man is Spirit.

Though man in his physical constitution is implicated in nature, yet in his personality he is spirit, supernatural and hypermaterial.

If materialism is to stand it must account for and explain all the

facts, both of personality and of the physical universe, by matter and its motor-force alone; failing to do this it is discredited as a theory of the universe. We must distinguish between accounting for and explaining by empirical science and by philosophy. A reality is explained and accounted for empirically when it is classified by resemblance and co-ordinated in a uniform sequence. Factual realities thus cognized in empirical science are accounted for and explained philosophically when they are interpreted and vindicated to the Reason by declaring the rational thought which they express, the rational law to which they conform, and the rational ideals and ends which they tend to realize. I propose to prove that the facts of personality and of the physical universe cannot be accounted for or explained either empirically or philosophically by matter and its motor-force.

I. The existence of spirit is necessary to account for and explain the facts of personality. Matter and motor-force cannot account for and explain them.

1. The properties and powers of personal beings are different from the properties and powers of matter; therefore there must be a spiritual agent or cause manifesting itself in personality, distinct and different from matter and the force which manifests itself in motion. Intuitions of self-consciousness and of reason, free choice, love, are not identical with motion nor with any change of matter which is resolvable into motion. Spirit is distinguished from matter by peculiar essential properties. We cannot distinguish substances by going behind the properties. Substance has no meaning divested of the properties in which it is manifested. We know substance only as a being persistent in certain properties or powers. We have then the same kind of reason for supposing the being or agent revealed in personal properties and acts to be a kind of agent different and distinct from matter, which reveals itself in force causing or arresting motion, as we have for supposing that oxygen is a different kind of being or agent from hydrogen. And the distinction and difference are more complete because the activities of oxygen and hydrogen are ultimately brought into the same class as modes of motion, while the activities of personality cannot be identified with motion, and the personal agent is thus distinct and different from all agents whose activities are solely modes of motion. Hence, as Dr. Carpenter says of spirit and matter, "the essential nature of these two entities is such that no relation of identity *can* exist between them."*

2. The supposition of the existence of spirit as the cause or agent manifested in the known facts of personality and necessary to

account for them, is entirely accordant with the methods of physical science.

Science recognizes at present sixty-four simple or elemental bodies. It assumes that the atoms of each of these have certain peculiar and unchangeable properties by which these elements are each distinguished from the others. "The diversity of matter results from primordial differences perpetually existing in the very essence of these atoms, and in the qualities which are the manifestation of them."* When in the known facts of personality we discover properties and activities differing from those of each of these elements and of all matter, especially in the fact that they are not modes of motion, we do but adopt the legitimate and uniform method of physical science in ascribing them to an agent or cause distinct and different from matter and its energy. There is nothing more difficult or unscientific in distinguishing the agent revealed in these phenomena from matter than in distinguishing the substance revealed in the phenomena of potassium from carbon or iron. We distinguish spirit as the agent in personality from all bodies, because the qualities in which it manifests itself are different from those of any and all bodies.

The scientific recognition of molecules, atoms, and the ether shows still more strikingly that our recognition of spirit as the agent manifesting itself in the phenomena of personality is accordant with the legitimate and customary method of empirical science. In ascertaining the essential reality of all that is presented to the senses, empirical science goes behind all which men commonly have in mind when thinking of matter to reality entirely imperceptible by the senses. In this it seems to find a sort of "thing in itself," the essential but hidden reality of all that is presented to sense. As the essential reality of matter it finds molecules and atoms; of sound, undulations of air; of heat, light and electricity, vibrations of an all-pervading ether. In each case that which science finds as the essential reality of matter and energy is that which is imperceptible by sense. The essential reality of the tangible is the intangible; of the audible is the inaudible; of the visible is the invisible; of the divisible is the indivisible; of the perceptible is the imperceptible. Thus underlying or within the gross matter and its motions which we perceive, is a world of atomic, molecular and ethereal matter which no human sense can grasp.

In this, science presents to our thought a reality of which we can have no perception and scarcely even a conception as matter. The atom itself, as some represent it, is no longer an infrangible mass "in solid singleness," as Lucretius described it and as Newton con-

* Wurtz: *The Atomic Theory*: Cleminshaw's Translation, p. 308.

ceived it, but a ring like the smoke-rings which rise from a locomotive or from the discharge of a cannon. This ring moves as a whole; at the same time its minute parts revolve at right angles around the circular line constituting the nucleus of the ring and "are indissolubly tied down to their circular paths, and can never quit them;" "the rings can move and change their form without the connection of the constituent parts ever being broken."* Thus in every pebble, in every visible bit of matter are millions of these indissoluble systems of vortex-atoms as complicated as the solar system, in which each part revolves in its orbit. And since the vortex-atom itself is inconceivably small, what are its parts measuring their little years by revolving forever within it, atoms of an atom, atoms to which the vortex-atom itself is as a universe? It is evident that these things are beyond our power, not of perception only, but also of conception, and issue in well nigh obliterating the very idea of the relations to space and time, which are the supposed essential characteristics of matter and motion.

The ether, also, must be noticed. It is "a medium which fills the universe and penetrates all bodies." Science does not profess to decide whether it is homogeneous and continuous, or is formed of atoms of a second order, which if immensely accumulated would be ponderable. Whatever it may be, the attempt to conceive it confounds all our habitual ideas of solid matter.

Physical science thus assumes a world utterly imperceptible and inconceivable as the essential reality of matter, as the real agent or cause manifesting itself in matter and motion as we perceive them. It accounts for masses of matter, which the senses perceive, by imperceptible atoms and molecules. It accounts for the most energetic forces that reveal themselves in their effects, as vibrations of ether which sense cannot perceive. It supposes a primitive fluid beneath the atoms themselves. "According to Thomson, though the primitive fluid is the only true matter, yet that which we call matter is not the primitive fluid itself, but a mode of motion of that primitive fluid. It is the mode of motion which constitutes the vortex-rings, and which furnishes us with examples of that permanence and continuity of existence which we are accustomed to attribute to matter itself. The primitive fluid, the only true matter, entirely eludes our perceptions when it is not endued with the mode of motion which converts certain portions of it into vortex-rings, and thus renders it molecular."†

It must also be observed that energy is the greatest at the farthest remove from gross matter; the more tenuous the matter the greater the

* Wurtz: *The Atomic Theory*, p. 327.

† Clerk-Maxwell: *Encyc. Brit.* 9th ed., *Atom.*, Vol. III., p. 45.

energy. I need only name heat, light and electricity. And if gravitation is, like those forces, accounted for by means of stress in an intervening medium, "the state of stress which we must suppose to exist in the invisible medium is three thousand times greater than that which the strongest steel could support."*

It is therefore in entire accord with the methods of empirical science to suppose spirit to be the essential reality, the real agent or cause manifesting itself in the facts of personality. We only add an agent that no sense can perceive, still further removed from gross matter than the atoms and the ether and with corresponding increase of active power. And as scientists are beginning to assume the reality of gross matter to be in a primitive fluid as the *prius* of the atoms themselves and constituting the atomic vortex-rings by its motion, it will not be surprising if it be found that all power and all material existence are accounted for ultimately only as manifesting the power of spirit.

3. I must add that we have more evidence of the existence of spirit than of atoms, molecules and ether. The assumed existence of the latter is confessedly hypothesis only, a convenient working hypothesis for scientific investigation; but while the hypothesis of the existence of spirit accounts and alone accounts for all the facts of personality, we have also knowledge of ourselves as persons in our own self-consciousness. So Mr. Huxley says: "The materialistic position that there is nothing in the world but matter, force and necessity is as utterly devoid of justification as the most baseless of theological dogmas."†

4. The supposition of a spirit manifested in the facts of personality and accounting for them is in the direction of the tendency of modern science to a dynamic conception of the universe. It has often been pointed out that matter can be resolved into force, but that force cannot be resolved into matter. Theories resolving matter in different ways into force have been from time to time proposed. To this conception recent science shows a marked tendency. Energy has become the prominent topic of scientific discussion and investigation. Dynamids are proposed instead of atoms. The absolute being, the Unknowable, the Ultimate Reality in which mind and matter, subject and object are united, is called by Spencer a Power. It is entirely in the line of this tendency of science to suppose that it is spirit which manifests itself in the facts of personality, and that Energizing Reason is the Absolute Power revealed in the universe.

In following this dynamic tendency science finds itself in inextricable difficulties. It passes beneath perceptible matter to its essential

* Clerk-Maxwell: Encyc. Brit. 9th ed., Attraction, Vol. III., p. 64.

† Lay Sermons: p. 144.

reality which it supposes itself to find in the ether and various orders of atoms. But ether discloses contradictory properties; it breaks down, as skeptics say the reason does, in irreconcilable antinomies. It is supposed to be exceedingly rare. Grove tells us that the particles of water are estimated to be relatively to their size as far apart as a hundred men would be if equally distributed over the surface of England. When the water is expanded into steam the distance is increased more than forty times; and by increasing the temperature the distance is increased much more.* The relative distance of the particles of ether must be immensely greater. But he says, no degree of rarefaction of a gas, "by heat, or the air-pump, or both, makes the slightest change in the apparent continuity of matter," under any experiment. Rare as ether is we have seen that it sustains a stress or strain three thousand times greater than the best steel can sustain; as Young says, it "is not only highly elastic, but absolutely solid;" as Jevons says, "it is immensely harder and more elastic than adamant." Sir John Herschel estimated the amount of force exerted by the ether to be seventeen trillions† of pounds to the square inch. Yet its resistance to the motion of the planets is too minute to be appreciated;‡ and we live and move in it without perceiving it. It is also inconceivably energetic. It has been calculated that in the red ray four hundred and seventy-four trillions, in the middle green six hundred trillions, and in the violet ray six hundred and ninety-nine trillions§ of vibrations of the ether strike on the retina of the eye in a second. Such an ether is entirely inconceivable. It is objected to the supposition of spirit that it is contrary to our experience. Certainly it is not more so than is the ether. Mr. Spencer also notices the fact that a "rhythmically moving molecule" is "mental in a threefold sense;" that is, separated from observed reality by a threefold remove; "so that the unit out of which we build our interpretation of material phenomena is triply ideal."|| Thus physical science, crowded by its own speculations to the utmost verge of solid matter, clings to it with difficulty, and is half ready to let go its hold and to rest only on energy potential and kinetic. This would be a long step towards idealism. For, as Dr. Carpenter, the physiologist, says, "While between matter and mind it is utterly vain to establish a relation of identity or analogy, a very close relation may be shown to exist between mind and force." It is impossible by any effort for the human mind to think of energy exerted in causing motion or other change, except as some being or agent exerts it. If there is motion, there must be something that is moved and something that

* Correlation of Forces, V., Light, p. 128.

† 17,000,000,000,000.

‡ Prof. Jevons: Principles of Science. Chap. xxiii., pp. 514, 516, 558.

§ 699,000,000,000,000.

|| Psychology. Vol. I., p. 625.

moves it. If matter itself is but the equilibrium of opposing forces occupying a portion of space, if in its various changes these forces are liberated and brought into equilibrium with other forces, then the disembodied energy must either be exerted by a spirit, or it must itself be hypostasized as an entity persisting in identity. But such an hypostasized force involves all the difficulties supposed to be in the idea of spirit. It would need only the addition of intelligence or the power of self-direction, and it would be spirit.

The supposition of the real existence both of body and finite spirit, and of absolute and eternal power as Energizing Reason, enables us to retain both matter and spirit, both nature and the supernatural, both the seen and the unseen world; and we are extricated from the difficulties inseparable from the hypothesis that all that exists is the manifestation of matter and force alone. If now we be compelled to admit that matter as perceived by human senses is phenomenon only and that its essential reality is beyond the reach of sense, and if the idea of matter even in its extra-sensible forms slips from us and the idea of energy alone is left, the energy is no longer an action without an agent, but is the activity of an energizing reason continually and progressively realizing its eternal ideals within the limitations and in the forms of space and time. This is analogous to the conclusion of the Spencerian philosophy, while free from difficulties inseparable from the latter, "that the term *matter* does not stand for any real existence, but only for one of the modes in which an Inscrutable Existence reveals itself to us within the limits of our terrestrial experience."*

II. The existence of some cause other than matter and force is necessary to account for and explain the physical universe itself; it cannot be accounted for and explained as mechanism. No physical cause or law as yet discovered by physical science is adequate to account for and explain it.

The laws of mechanism declare what is the invariable action of motor-force on matter; when fully known they may be formulated mathematically. The theory that the universe is mechanism presupposes only matter and the force which is manifested in motion, molar or molecular. All the activity in the universe consists in the rearrangement or distribution of matter and force according to the laws of mechanics. In its more common form it supposes the force to be inherent in matter and always present either as potential or energetic. In its second and strictest form it supposes gravitation and all the forces of nature to result from the impact of moving bodies.

The very ideas of matter and force suggest questions and difficulties

which carry us beyond mechanism. As Du Bois-Reymond says: "In the ideas of matter and force we see returning the same dualism which expresses itself in God and the world, soul and body."*

The law of the Persistence of Force declares the unity and continuity of force. The discovery of this law was supposed by many to establish beyond all further question the theory that the universe is a machine and all its phenomena⁴ explicable by the principles and laws of mechanism. But it is evident that this law and all theories of mechanism resting on it, not only fail to explain and account for the facts of personality, but equally for the known action of physical force.

Gravitation itself cannot be accounted for by this law. It is a fact that energy is communicated from the sun to the earth. A fiery cyclone in the sun transmits energy to the earth which moves a magnetic needle. The energy of the sun sustains all organic life. But the gravitation of the earth to the sun cannot be accounted for or explained by the law of the persistence of force.

We may first assume the common explanation that gravitation is an inherent property of matter, that the energy is exerted by the matter itself.

The first difficulty then is that we have action at a distance. This is contrary to the common conviction that a body cannot act where it is not; it implies a disembodied force or motion passing through space; it involves every difficulty supposed to be implied in a disembodied spirit, and the additional difficulty of supposing an energy to exist where no being is present to exert it, or a motion where no being is present to move.

A second difficulty, if attraction is an essential property of matter, is that the energy is continually exerted without being expended and thus must continually increase the amount of energy in the universe. A moving body transmits energy to the body against which it strikes, and loses the energy which it transmits. But if attraction is an essential property of the sun, there is no transfer of energy from the sun to the planets. The sun is continually emitting energy into an immeasurable sphere, but it loses no energy; its power of attraction is not restored to it by impact from other bodies; it is an ever full and inexhaustible fountain from which the energy of attraction streams continuously forever. This conception of gravitation is therefore entirely incompatible with the law of the persistence of force. It implies that the amount of energy in the universe is continually increased. Every body in the universe by its power of attraction is continuously and inexhaustibly giving out energy.

* Untersuchungen über thierische Electricität, S. 40.

Another difficulty is that the force seems to act instantaneously; every body in the universe takes cognizance of the change of position of every other body and moves accordingly. Another difficulty is that the force is not obstructed by any intervening body, but all bodies are transparent to it.

If to escape these difficulties we change our theory and assume that gravitation is accounted for by molecular action and so is correlated with all energy, the difficulties remain. Hypotheses accounting for gravitation in this way are at present little more than fancies, guesses or suggestions; but as the best work of keen, scientific minds, they strikingly exemplify the truth of my proposition.

If the ether is supposed to be continuous, filling all space, the old question of the *plenum* and the *vacuum* returns. If matter is continuous, filling all space, how is motion possible? And if possibility of motion is still affirmed, have we not essentially changed the very idea of matter as solid or occupying space?

If, however, the ether is discontinuous, composed of atoms of a second order finer than those of gross matter, we are no nearer a satisfactory explanation.

Suppose, for example, that the energy of gravitation is transmitted through space by the impact of the atoms of the ether; we do not escape the necessity of action at a distance; for, as Clerk-Maxwell says, "we have no evidence that real contact ever takes place between two bodies . . . and all that we have done is to substitute for a single action at a great distance a series of actions at smaller distances between the parts of a medium; so that we cannot even thus get rid of action at a distance." Also, according to this second form of the theory of the universe as mechanism, potential force could no longer be recognized; for force would exist, not as inherent in bodies, but only as energizing in motion and communicated in the impact of bodies.

Nor do we escape the difficulties as to the expenditure and accumulation of force. Of the hypothesis accounting for gravitation by molecular action, the one most completely worked out appears to be that of Le Sage. He supposes corpuscles, so small that they very rarely collide with one another, streaming in all directions into our universe from beyond its limits. A body alone in free space would be so equally bombarded on all sides by these corpuscles that it would not be moved. But when two bodies confront each other, the confronting sides will be partially screened from the bombardment, and the excess of corpuscles impinging on the outer sides drive the bodies towards each other. It has been calculated that the rate at which energy would be thus spent in order to maintain the gravitating property of a single pound, would be at least millions of millions of foot-pounds in a

second. A large part of this immense amount of energy which the corpuscles bring with them they do not carry away. It is not transformed into heat; for "if any appreciable fraction of this energy is communicated to the body in the form of heat, the amount of heat so generated would in a few seconds raise it, and in like manner the whole material universe, to a white heat." What becomes of it remains unaccounted for. It must either be annihilated or its continuous influx must increase the amount of energy in the universe. Clerk-Maxwell, from whom I take the account of Le Sage's hypothesis, has examined it and two other molecular theories of gravitation, and finds it impossible by any one of them to account for gravitation in accordance with the law of the persistence of force.

Similar difficulties are involved in all attempts to explain, in accordance with this law, cohesive attraction and chemical affinity, either as properties of matter or as results of molecular action, and also all interaction of matter, molar or molecular. The changes in nature are effected by complex causes, each modifying the other. They act together like a swarm of bees building and filling their honey-comb, or crowds of coral zoophytes working together through many generations, building a brain-coral or a Neptune's cup. The several bodies are never in perfect contact. If the several molecules or other agents each exerts its power continuously, acting on whatever comes within its range, then there is continuous expenditure without resupply and without exhaustion, and a continuous increase of the sum total of force. If, on the other hand, the force sinks inactive into potentiality until the other agent comes near, how is the presence of the other agent signaled across the intervening space? The energy exerted by a body varies with its varying conditions. Chemical substances in their nascent state exhibit powers which they exert at no other time. Some substances have no affinity at a low temperature, but readily combine when heated to certain higher degrees. A force which thus depends on conditions, and which comes and goes, cannot be an inherent property of the body. We should have to say that the body had this power down to a certain temperature, or within certain conditions, and otherwise had it not; as Galileo, when told that water cannot be raised in a pump above thirty-two feet, replied that he supposed nature abhorred a vacuum to the distance of thirty-two feet and beyond that did not abhor it. Thus the mechanical theory in its second form fails to explain the interaction of bodies, whether molar or molecular, and their co-action in a complex of causes. It seems impossible that an unconscious atom or mass of matter, whose force is inactive in potentiality, should suddenly emit it at the approach of a body separated whether far or near in space, and every moment adjust it instan-

taneously and with mathematical exactness to the varying distances and conditions of all the atoms or masses on which it acts—the action being adjusted not only to a single body and its conditions but to a great number of bodies, molar or molecular, changing at every moment.

As physical science pushes its researches farther and farther it is noticeable that its explanations of facts solely by mechanism become artificial, complicated, and sometimes inconceivable and seemingly contradictory. This of itself creates a presumption that the mechanical theory is inadequate and must give way to a scientific exposition less affecting extreme simplicity as a theory and involving less intricacy, artificiality and difficulty in its detailed explanation of facts.

III. Scientists themselves have recognized in various ways the necessity of some power other than matter and force to account for and explain the known facts of personality and also of the physical or material world.

This is involved in the conclusion to which Mr. Spencer comes: "By the persistence of force we really mean the persistence of some Power which transcends our knowledge and conception. . . . The persistence of Force is but another mode of asserting an Unconditioned Reality, without beginning or end. . . . The axiomatic truths of physical science unavoidably postulate Absolute Being as their common basis."* Others, while denying the existence of supernatural and hyper-material spirit, have found themselves compelled to recognize spirit or some force analogous to it; as in Hylozoism, or the doctrine of the soul of the world, or the world a living organism; as also by Czolbe, who, in his "Limits and Origin of Human Knowledge," (1865), supposes "a sort of world-soul which consists of sensations that are immutably bound up with the vibrations of atoms, and that only condense themselves in the human organism and are aggregated into the sum of the life of the soul." The same necessity is exemplified in the unconscious intelligence of Hartmann, in the unconscious will of Schopenhauer, and in Noiré's assumption of "a monadic Nature-essence, endowed with the attributes of extension and feeling." Scientists also find themselves compelled to recognize a *directive* force, as well as the energy which is manifested in motion. In explaining certain phenomena of the mixing of gases, Sir William Thomson and Clerk-Maxwell suppose, as a concrete representation of this directive power, molecular "demons," having intelligence enough to open a door to particles approaching it with velocity above a certain rate on one side or below that rate on the other. Paracelsus supposed an *Archeus* in

* First Principles, § 74, pp. 255, 256.

the stomach that directed the process of digestion ; besides this, Van Helmont supposed a *Pylorus* opening and shutting the pyloric orifice. The fact that the most skilled investigators using the severest scientific methods find a directive agency in nature which they can best represent by recurring to the mediæval supposition of an intelligent agent, a molecular "demon" directing movements and opening and shutting doors, is one of the many evidences that there is in matter and energy a power other than matter and energy, without which these observed facts cannot be explained.

It may be added that the universe is more closely analogous to a living organism than to a machine. The latter is a completed structure into which no new part or function can be admitted without spoiling the machine. In a living organism, on the contrary, all the parts are subordinate to the whole and act concurrently and progressively in the realization of its plan or ideal ; and there is perpetual transition, perpetual reception and emission of both matter and force in the process. If then either of these forms of matter must be taken as the matrix in which to mold our thought of the cosmos, it must be the organism rather than the machine. And especially is this required by the theory of evolution ; for it presents nature not as a rigid, completed, unchangeable machine, but as material in the highest degree plastic, never fixed in a completed arrangement, always in transition, always receptive and outgoing ; and in fact it usually describes the physical process as a growth though it uses the names of development or evolution.

IV. We are, then, forced to conclude that materialism cannot account for and explain the facts of matter and motor-force, and much less the facts of personality. Du Bois-Reymond, in his lecture at Leipzig "On the Limits of the Knowledge of Nature," reaches the same conclusion : "We are not in a position to conceive the atoms ; and we are unable from the atoms and their motion to explain the slightest phenomenon of consciousness. We may turn and twist the notion of matter as we like, we always come on an ultimate something that is incomprehensible if not absolutely contradictory, as in the hypothesis of forces which act at a distance through empty space. There is no hope of ever solving this problem ; the hindrance is transcendental."*

Materialism, then, must admit that it cannot explain the known facts of the universe. Therein it acknowledges its own defeat. As Lange truly says : "The whole cause of Materialism is lost by the admission of the inexplicableness of all natural occurrences. If mate-

* See Lange : History of Materialism ; translation by Thomas. Vol. II., 309.

rialism quietly acquiesces in this inexplicableness, it ceases to be a philosophical principle.”*

V. The reasonable conclusion is that man as a personal being is spirit, supernatural and hyper-material. He has knowledge of himself in his own self-consciousness as a person. Personality thus known cannot be identified with matter and the energy which manifests itself in motion. It is also legitimate, according to the common usage of science, to assume a peculiar agent manifesting itself in the attributes of personality and accounting for them. Matter and energy themselves require the assumption of some agent other than matter and energy to account for them; materialism can account for neither the facts of personality nor the facts of matter and motor-force. Thus by the severest scientific investigations the knowledge of self given in self-consciousness is confirmed, and the result of reasoning is that in knowing myself a person I know myself as spirit supernatural and hyper-material. And thus also the way is opened to the conclusion that the transcendent Power which is the absolute ground of the universe is the absolute Reason, the eternal Spirit, the personal God. And this knowledge fills me with reverence for myself as, by personality, in the image of God and ennobled above matter and its energies, however sublime they may be in their manifestations in the universe, and however weak and short-lived I may be in my physical connection with the material world. Pascal says: “Man is but a reed, the weakest thing in nature, but it is a reed that thinks. There is no need that the universe arm itself to crush him. A vapor, a drop of water is enough to kill him. But though the universe should crush him, man is more noble than that which destroys him, for he knows that he dies; but the universe, with all the advantage which it has over him, the universe knows nothing whatever about it.”† And Kant says: “Two things fill my soul with always new and increasing wonder and awe, and often and persistently my thought busies itself therewith:—the starry heavens above me and the moral law within me. Both I need not seek and merely conjecture as concealed in darkness or in their greatness beyond my vision; I see them before me and knit them immediately with the consciousness of existence. The first begins at the place which I occupy in the world of sense and broadens into the immeasurable vast of space and time my connection with worlds on worlds and systems on systems. The second begins at my invisible self, my personality, and places me in a universe which has true infinitude but is perceptible only to the intellect, and with which I know myself connected, not, as in the other

* History of Materialism; Thomas' Trans. Vol. II., p. 161.

† Pascal: *Pensées*, Chap. ii., X., p. 132, Louandre's Ed. Paris: 1858.

case, by contingent, but by universal and necessary connections. The first glance at an innumerable multitude of worlds annihilates my importance as an animal creature that must give back the matter of which it was made to the planet—itsself a mere point in the universe—after it has been for a short time, we know not how short, endowed with vital force. The second, on the contrary, exalts my worth as an intelligence infinitely, through my personality, in which the moral law reveals to me a life independent of animal nature and even of the whole universe of sense, at least so far as the end of my existence is determined by this law which is not limited within the conditions and bounds of this life, but goes on into infinitude.”*

* Kritik der Praktischen Vernunft: Beschluss: Werke, 8, 312.

✓

CHAPTER XVII.

MATERIALISTIC OBJECTIONS TO THE EXISTENCE OF PERSONAL BEINGS.

§ 78. The First Materialistic Objection: from Sensationalism, or the Complete Positivism of Comte.

As in the progress of investigation it becomes apparent that the facts both of personality and of nature cannot be accounted for by matter and force alone, and that the existence of some supernatural and hyper-material power must be acknowledged to explain them, the materialist is shut up to the alternative either to recognize some such transcendent power or to return to the complete positivism of Comte, and refuse all recognition of atoms, molecules, ether, cause and force. We suppose that he resorts to the latter position. Against the doctrine that personal beings are spirit he objects that man has knowledge only of the phenomena of sense. This is materialism on its subjective side. Thus Lange says: "Sensationalism is the subjective of which materialism is the objective." So I. H. Fichte: "Materialism and sensationalism are the same; the latter defined subjectively, as to our sources of knowledge; the former objectively, as to what is known."*

I have shown in previous discussions that every theory of sensationalism and phenomenalism is a false and inadequate theory of knowledge. To these discussions I may refer as an answer to the objection. If the theory of knowledge is false, the objection founded on it is nullified. It is necessary to add only some considerations bearing directly on the presentation of the theory as subjective materialism, and constituting additional evidence that the theory is inconsistent and untenable.

I. The first answer is that the sensational philosophy or the complete Positivism of Comte is inconsistent with materialism. Materialism asserts the existence, indestructibility and eternity of matter and force. It goes beneath phenomena and finds their essential reality in matter and force. It asserts knowledge of self-existent, absolute

* Lange: *Geschichte des Materialismus*, I., 26. I. H. Fichte: *Theistische Weltanschauung*, S. 63.

being, and the knowledge that that being is matter. Sensationalism is contradicted by all of these assertions.

I have said that the doctrine that knowledge is limited to objects of sense is the subjective side of materialism. It is evident that this subjective side of materialism is in direct contradiction of objective materialism, which asserts the eternity of matter. Whoever accepts the complete positivism of Comte must renounce materialism or else contradict himself. It is thus that Mr. Huxley disclaims materialism. He says: "All that we know about motion is that it is a name for certain changes in the relation of our visual, tactile and muscular sensations; and all that we know about matter is that it is the hypothetical substance of physical phenomena, the assumption of the existence of which is as pure a piece of metaphysical speculation as that of the substance of mind. Our sensations, our pleasures, our pains, and the relations of these make up the sum total of the elements of positive, unquestionable knowledge. We call a large section of these sensations and their relations matter and motion; the rest we term mind and thinking; and experience shows that there is a constant order of succession between some of the former and some of the latter."* He can disclaim being a materialist because he is a complete positivist or sensationalist. And yet he admits that it is as impossible for a scientist to think without using metaphysics as for a Brahmin to eat and drink without destroying animal life. Metaphysical ideas are at the basis of all scientific thought and knowledge.

Complete Positivism is equally inconsistent with the Spencerian agnosticism, which declares that the belief that absolute being exists is a primitive datum of consciousness, although it is impossible to know what it is.

Both the materialist and the Spencerian agnostic build on those primitive principles of intelligence which, as constituent elements of reason, of themselves imply the existence of the mind and disclose its rational constitution.

Materialism is, however, inconsistent with Spencer's agnosticism. While the latter insists that it is impossible to know what the Absolute is, the materialist explicitly affirms that it is matter and motor-force.

Here are three theories, each excluding the others. A materialist cannot accept the position nor use the arguments of the sensationalist nor those of the agnostic. And yet these three theories are continually confounded and often grouped together under the name of materialism. And the denier of theism is found slipping back and forth from one of these positions to another, using indiscriminately the objections

* Sensation and Sensiferous Organs; Nineteenth Century: 1879.

peculiar to each. It is important therefore that their distinction and incompatibility be pointed out, in order to expose these subterfuges, whether resorted to in ignorance or in sophistry.

II. Sensationalism, being a false theory of knowledge, is inconsistent with physical science.

In the first place, whoever accepts it as the basis of denying the existence of spirit, must give up the law of the Persistence of Force. Comte rigorously excluded the ideas of cause and force, of atoms, molecules and ether from science. He insisted that if the idea of cause is once admitted, that of a first cause must be admitted with it and theology would be inevitable and legitimate. But at the very time when he was elaborately propounding this doctrine in his Positive Philosophy, the investigations of Mayer and others were already going on which have established the law of the persistence of force—a sort of physical embodiment of the metaphysical principle of causation; have set forth force, which Comte insisted on excluding, as an essential reality of the physical universe and the central topic of physical science; have set up the hypotheses of atoms, molecules and the ether; and have saturated physical science itself with metaphysics and theology. In consequence of this, whoever goes back to sensationalism as the theory of knowledge, finds himself left behind by scientific thought in every direction. Physical science cannot be held in the cerements of sensationalism in which Comte endeavored to embalm it. It goes beneath the phenomena to their essential reality; it reveals the “thing in itself” of gross matter and its perceptible motions, in vortex-atoms and in ethers, in vibrations, undulations, impacts beyond the range of perception and even of conception; it declares the existence, persistence and indestructibility of matter and force. It goes abroad through all space and backwards and forwards through all time, and reveals the necessary activities and transformations of physical forces. It finds masses, distances, motions and energies measurable and their laws determinable, in accordance with that pure creation of the human mind, mathematics, in which every conclusion is demonstrated. Thus instead of saying that all knowledge is given in sense, we find that the greater part of knowledge transcends sense; instead of saying that sense gives the only certainty, we may almost say, “The farther from sense the greater the certainty.” Accordingly Dr. Youmans says of Physical Science that “its tendency is ever from the material toward the abstract, the ideal, the spiritual.”*

Mr. Lewes says: “The sensational hypothesis is acceptable if by sense we understand sensibility and *its laws of operation*. This indeed . . .

* Correlation and Conservation of Force, p. 11.

is an extension of the term, and obliterates the very distinction insisted on by the other school; but since it includes all psychical phenomena under the rubric of sensibility, it enables psychological analysis to be consistent and exhaustive;" without this change, he admits, "The reduction of all knowledge to a sensuous origin is absurd."* That is, he changes the meaning of Sense, so as to include in it all the primitive data of intelligence and the principles regulative of all thought, and then claims that all psychical powers are included in sense.

III. Sensationalism is self-contradictory, and involves difficulties which only the recognition of personal spirit can remove. It starts as a form of materialism. We have knowledge through the senses; that is, we have knowledge of objects of sense and of these alone. The outward object is assumed to exist independent of sense, and sensation itself arises as an impression on the sensorium. And it is affirmed that the outward object existed ages before there was any living sensorium susceptible of receiving impressions or sensations from it. Mind, then, has no reality except as related to the outward or material object. It becomes merely "the series of our sensations," "a thread of consciousness." The Ego is lost in the non-ego. Even Mill, who transcended the sensationalism of Comte by the recognition of consciousness as a knowledge of internal feelings, is obliged to define mind only as relative to matter; it is "nothing but the series of our sensations (to which must now be added our internal feelings) as they actually occur, with the addition of infinite possibilities of feeling requiring for their actual realization conditions which may or may not take place, but which as possibilities are always in existence, and many of them present."† Mind, therefore, is a series of sensations, and as such, is merely a phenomenon of matter.

But when sensationalism comes to define the outward or material object, it can define it only as an object of sense. Matter exists only as relative to sense. Its only reality is sensation. The reality of matter is only its relation to mind. So Clifford: "This world which I perceive is my perception and nothing more."‡ So Moleschott: "Except in relation to the eye, into which it sends its rays, the tree has no existence."§ So Mill: "Matter may be defined a Permanent Possibility of Sensation."|| And so Mr. Huxley, in the passage last quoted from him, identifies matter with sensation. Here sensationalism issues in Idealism; the non-ego disappears in the Ego. But not the less, after resolving the material world into sensations, do the sensation-

* Problems of Life and Mind. Vol. I., pp. 191, 192.

† Mill on Hamilton, I., 253.

‡ Lectures and Essays. Vol. I., p. 288.

§ Lange: Hist. Materialism; Thomas' Trans. Vol. I., pp. 41, 42.

|| On Hamilton, I., 243.

alists affirm its existence millions of ages before there was any mind to perceive it. Thus they begin with affirming that mind is a function of matter and end with affirming that matter is a phenomenon of mind. When the sensationalist seeks to apprehend mind, he can apprehend it only as sensations which presuppose the existence of matter and are occasioned by its presence. When he seeks to apprehend matter, it is merely an object of sense having reality only as related to the sensations which it is supposed to precede and occasion. We are told that mind consists of sensations occasioned by the presence of bodies and then we are told that bodies are merely abstractions of the sensations which themselves occasion. If we attempt to stop this logical see-saw, and insist on definitions of mind and matter which will not alternately annul each other, the only reality left to either term is sensation, without an object felt or a subject feeling. And this necessitates complete agnosticism. This process was exemplified in the transition of English philosophy from Locke through Berkeley to Hume; from sensationalism through idealism to universal skepticism or complete agnosticism.

Berkeley, however, saved himself from inconsistency by admitting our knowledge of personal being and using the idealism thus developed to refute sensationalism. He, therefore, could acknowledge that the essence of matter is in its relativity to mind and still consistently hold to its reality because mind is real. And he consistently argued that since "sensible things . . . depend not on *my* thought and have an existence distinct from being perceived *by me*, there must be some other mind wherein they exist. As sure, therefore, as the sensible world really exists, so sure is there an infinite omnipresent spirit who contains and supports it."* But Mill and the sensationalists leave themselves no resource by which to save either the Ego or the non-ego.

These speculations have a curious interest as exemplifying the inextricable difficulties inseparable from denying the existence of spirit. Prof. Huxley says: "The existence of a self and a not-self are hypotheses by which we account for the facts of consciousness."† But who makes the hypothesis, and to whom do the facts of consciousness appear, and to whom is it necessary to account for them? In the definitions of mind and matter just now cited we have for the outward world a possibility without any power, a permanence with nothing that is permanent except a powerless possibility, and the permanent possibility of a sensation without any entity or being other than the sensation. For the self we have sensations in a series with no mind which is the subject of them or takes cognizance of their serial order; "infinite possibilities of feeling" with no power or being within or without to make them pos-

* Berkeley's Three Dialogues.

† Lay Sermons, p. 356.

sible; these possibilities "requiring for their actual realization conditions which may or may not take place," these conditions themselves being possibilities of sensation; though these possibilities of sensation which are the conditions of the possibility of sensation may never take place, yet "as possibilities they are always in existence and many of them present." Did ever mediæval scholastic bewilder himself and his readers in a more confusing maze of words?

Mr. Spencer with his "transfigured realism" still finds himself in similar difficulties. "We can think of matter only in terms of mind. We can think of mind only in terms of matter. When we have pushed our explorations of the first to the utmost limit, we are referred to the second for a final answer; and when we have got the final answer to the second we are referred back to the first for an interpretation of it. We find the value of x in the terms of y ; then we find the value of y in the terms of x ; and so on we may continue forever without coming nearer to a solution."*

When it is shown that sensationalism is inconsistent with materialism, the sensationalist may reply that he cares no more for materialism and the agnostic's Unknowable, than for atheism, theism or metaphysics; they are alike beyond the sphere of human knowledge and have no legitimate place in scientific thought. He may comfort himself with thinking that at least he will escape all these puzzling questions and have opportunity to pursue unvexed his investigations among phenomena of which he can have certain knowledge. We now see that in this expectation he is necessarily disappointed. Physical science leaves him behind helplessly entangled in the difficulties and inconsistencies of his own theory of knowledge.

IV. But if we acknowledge the existence in the personality of man of a power supernatural and hyper-material, that is, of spirit, all these difficulties vanish, and the reality of our knowledge both of nature and the supernatural, of matter and the hyper-material is established on an immovable basis. And the truth of this admission is confirmed by the fact that it solves the otherwise unsolvable problem of the universe. We are no longer obliged with Spencer to find the Ultimate Reality in an Absolute Unknowable, in which subject and object, spirit and matter are united. We find that Ultimate and Absolute Reality in Energizing Reason. In this we find united and eternal the Reason and the Power, which account for the existence both of matter and finite spirits in the unity of one all-comprehending and rational system expressing the truths, conformed to the laws, and progressively realizing the ideals and ends of the Wisdom and Love of perfect and absolute Reason.

* Psychology: § 272, Vol. I., p. 627.

V. Aside from scientific thought the impression also prevails in the popular mind that we have clear and certain knowledge only through the senses. To this unscientific impression materialists appeal; they say a spirit is a "ghost," which no sensible person believes to exist; it is "nothing." And this impression is undoubtedly an important source of doubt or disbelief of the existence of spirit or the supernatural.

But if people would give the subject a little thought they would know that knowledge does not come from the senses alone. Even of the outward world we know far more than we see or handle. We do not so much see with our eyes as through them; not so much the visible as the invisible. On a printed page all which the eye sees is some black marks on a white surface; but through the marks I see the thoughts of the writer, and the scenes and events which he describes. In prospecting for ore one sees with the eye only the ground and the rocks; but through these he sees the ore which the visible formation reveals. A babe sees on its mother's face certain configurations of the surface; but through the smile, the frown, or the tears it sees the mother's heart. We read nature like a book, seeing the unseen through the seen. And the unseen includes the greater part of our knowledge of nature.

Nor are the impressions of sense the only trustworthy knowledge. A man has certain knowledge of his own thoughts and feelings, of his own individuality and identity. But the knowledge of these realities transcends sense. He has knowledge of mathematical axioms and demonstrations; and though he may question the correctness of his observation of a sensible object, he cannot doubt the truth of a mathematical demonstration. When the senses present to us the firmament as a blue dome, through which the sun and stars move from east to west, or parallel rails as converging, we must resort to reason and judgment to find the true significance of the sensible presentation. Every hour of the day we thus interpret and correct the representations of sense by the larger knowledge of reason transcending sense.

§ 79. Second Materialistic Objection: from the Correlation of Mental Phenomena with Motion.

I. A second objection to the existence of personal spirit is that all mental phenomena are correlated with molecular motion of the brain and nerves, and are transformable into it; that thus they are fully accounted for and explained by the law of the persistence of force; and therefore they are no evidence or manifestation of the existence of spirit. This is the essential doctrine of the current materialism. Its existence is staked on proving this doctrine; failing to establish it

materialism demonstrates that it has no explanation of mental phenomena and has no further claims to consideration as a philosophical system.

The materialism of the eighteenth century also rested on physiological explanations of the facts of mind. Cabanis in his earlier writings taught that the brain secretes thought as the liver secretes bile. Condillac taught that all mental phenomena are simply transformed sensations. Baron d'Holbach defined thought to be an agitation of the nerves. Lamettrie and Helvetius broached a similar doctrine. Noiré says that the materialists of that century taught that a fume of the stomach, if it had taken its way upward to the brain, might have become a sublime thought.*

The physiological materialism of to-day, though connected with an advanced knowledge of science, is scarcely less crude. Moleschott teaches that "thought is a motion of matter." Karl Vogt holds, with Cabanis, that "thought stands in the same relation to the brain as the bile to the liver." Dr. Büchner, following Vogt, though objecting to the coarseness and inexactness of his illustration, teaches that the soul is a product of the development of the brain, just as muscular activity is a product of muscular development, and secretion a product of glandular development. "The same power which digests by means of the stomach, thinks by means of the brain." "The brain is only the carrier and the source, or rather the sole cause of the spirit or thought." "Mental activity is a function of the cerebral substance."† Mr. Charles Bray says: "Conscious cerebration or mind is transformed force received into the body in the food, and is, like all force, persistent or indestructible."‡ Prof. Haeckel says: "The human mind is a function of the central nervous system."§ Lewes says: "The neural process and the feeling are one and the same process viewed under different aspects. . . . Mind . . . is a function of the organism; and this both in the mathematical and the biological sense of the term."|| Prof. Tyndall, though elsewhere explicitly denying that matter as ordinarily conceived can explain life and mind, yet "prolongs the vision backward . . . and discerns in matter . . . the promise and potency of every form and quality of terrestrial life."¶ Prof. Huxley says: "While it is impossible to demonstrate that any given phenomenon is not the effect of a material cause, any one who is acquainted with the history of science will admit that its progress has in all ages meant,

* Die Welt als Entwicklung des Geistes; ss. 18, 19.

† Kraft und Stoff. Chaps. xii., xiii.

‡ Force and its Mental and Moral Correlates: p. 98.

§ Evolution of Man. Vol. II., p. 454. Translation.

|| Problems of Life and Mind. II., 411.

¶ Belfast Address.

and now more than ever means, the extension of the province of what we call matter and causation, and the concomitant gradual banishment from all regions of human thought of what we call spirit and spontaneity."* Lange says: "The peculiar kind of motion which we call rational must be explained by the common laws of all motion, or there is no explanation at all. The defect of all materialism is that it stops with this explanation at the point where the highest problems of philosophy begin. But whoever boggles with pretended principles of reason, which admit of no concrete intelligent apprehension, in the explanation of outward nature including the rational man, destroys the whole basis of science, whether his name is Aristotle or Zeller."†

II. Before refuting this objection I make the following explanations of the question at issue:

1. Admitting that mental action in man is accompanied by molecular action of the brain and by waste of neural matter which must be replaced by food, I propose to show that materialism cannot account for the mental action.

If an observer with a microscope could see in the living brain the molecular orbits of anger and the different molecular orbits of love, that would no more prove a materializing of mind than the familiar fact that without a microscope we see anger paling in the face and benignity beaming upon it. The fact that the spirit in its action affects the bodily organization does not disprove the existence of spirit any more than the fact that piano-keys have different combinations of movement to express different tunes proves that music is identical with the motion, and that there is no musician. Moleschott's "No thought without phosphorus," might be true of all living men, and yet not prove materialism nor disprove the existence of spirit. Materialism cannot account for or explain mental phenomena by the fact that they are accompanied by molecular action of the brain. It not only cannot account for them philosophically, but it also cannot account for them empirically by co-ordinating the mental phenomena and the molecular motions under the law of the persistence of force. And if it cannot account for them, it proves itself false; for it is the very essence of materialism that it must account for all phenomena, physical and mental, by matter and motor-force.

2. It is not essential to my argument to prove that the human spirit or any finite spirit ever exists and acts separate from and independent of matter. This connection is analogous to the connection between matter and force as commonly presented in physical science. Matter and force

* Physical Basis of Life: p. 20.

† Geschichte des Materialismus. I., 20, 21.

are not identified by science and they are not disparted ; they are distinct and yet together. The movements of bodies compel the belief that there is something which is moved, which we call matter, and some power that moves it which we call force. Science thus sharply distinguishes them, while it recoils from the belief that either exists without the other. Just so philosophy concludes from the facts of personality and even from those of force itself, that there must exist another power, distinct from both matter and force, which it calls spirit. While spirit is thus distinct from matter and force and cannot be identified with them, it is not necessary to its existence that it be disparted from them. And if it should be found that all finite spirit in the universe is in some way connected with some form of matter, the fact would not conflict with the fact of its existence as spirit, endowed with attributes of personality, and distinct alike from matter and the energy which causes motion. This is accordant with what we have already seen, that matter is not the bound and prison of the spirit, but rather gives occasion and excitement, instruments and resources, place and scope for its action and development.

And this accords with the well-known teachings both of philosophy and theology. In all our experience in this life we know the spirit of man acting through brain and nerve. The spirit, "here in the body pent," is often conceived of under some illustration like that of a man in submarine armor, working encumbered and straitened for breath at the bottom of the sea ; but he is to rise to the upper air, a sphere better fitted for his life and action. Yet there he is disencumbered of his armor only to put on a clothing more pliable to his movements, and is liberated from his watery environment only to breathe the freer air. So the Scriptures represent the spirit leaving the earthly body, "not to be unclothed but clothed upon ;" acting in a "spiritual body" amid celestial environments. As force passes from body to body revealing itself in new forms and yet does not cease to be force, so spirit may enswathe itself in new and ethereal matter and yet not cease to be spirit.

Materialists compare the brain to a musical instrument, and the mental phenomena to the music. It is true, they say, that the music of a piano cannot be identified with the movements of the keys ; but when the instrument is destroyed the music perishes. But in fact this comparison signifies just the contrary. For the music is not in the piano any more than the mental phenomena are in the brain. The music is in the mind of the hearer, it came from the mind of the composer, and expresses the mind of the pianist. If the piano is destroyed the music survives in the musical mind which presently finds for it a new instrument by which it can reveal itself again. Even when the

musician's hand has lost its skill, the music survives in his mind inaudible, ready again to burst on the ear when a hand capable of musical execution is provided.

"As a good harper stricken far in years,
 Into whose cunning hand the gout doth fall,
 All his old crotchets in his mind he bears,
 But on his harp plays ill or not at all."

3. It is not necessary to my argument to deny that vitality is co-ordinated with motion under the law of the persistence of force. Scientists are by no means agreed in accepting this co-ordination as an established fact.* But if it were so, it would not prove that personality is thus co-ordinated; for personality is much more than vitality. What is true of vitality, which may exist in a vegetable, is not therefore true of personality. This would be like arguing that because some physiological phenomena can be explained by chemical or mechanical action, therefore man is not alive. It is equally futile to argue that because life can be explained by the law of the persistence of force, therefore man is not a person.

With these explanations I proceed to answer the objection under consideration.

✓ 1. III. My first answer is that the correlation and reciprocal convertibility of mental phenomena with the molecular motion of the brain is not sustained by physical science.

1. Mental phenomena are essentially unlike motion and cannot be measured, as force is, by foot-pounds. Force manifests its presence in molecular motion and causes waste of brain. But the phenomena to be explained are not motion and waste of brain, but conscious thought, feeling and determination. All that matter and force can account for is the motion and waste of brain. They cannot account for the totally different phenomena of mind. We are as far as ever from explaining them. This is clearly expressed by Dr. J. R. Mayer, one of the scientists prominent in establishing the law of the Persistence of Force: "It is a great error to identify these two activities (thought and the molecular action of the brain), which proceed parallel to each other. . . . We know there can be no telegraphic communication without a concomitant chemical action. But what the telegraph says could never be regarded as the function of the electro-chemical action. This is still truer of the brain and thought. The brain is only the machine, it is not the thought. Intelligence, which is not a part of sensible things, cannot be submitted to the investigation of the physicist

* Prof. Balfour Stewart: *Conservation of Energy*, p. 173.

and the anatomist; what is true subjectively is also true objectively. Without this harmony, eternally established by God, between the subjective and the objective worlds, all our thinking would be sterile.”*

2. If force were transformed into thought, feeling or determination, it would cease to be force and would disappear. The only manifestation of force is motion. But thought, emotion, and choice or volition are not motion. But according to the supposition the force which was first manifested in the motion of the brain, is next manifested in these conscious mental acts. It is transformed into thought, feeling and determination precisely as the molar motion of a hammer striking an anvil is transformed into molecular motion. It is transformed into something which is not motion and which cannot be measured. And there is no evidence that it ever reappears as force. The doctrine, then, can have no scientific basis till it can be proved that a measured quantity of force is transformed into a measured and equal quantity of thought, feeling or determination, and this quantity of thought, feeling or determination is transformed back into the original quantity of force. This of course can never be done, for mental qualities cannot be quantitatively measured.

3. All the force manifested in the molecular action is fully accounted for by physical changes in the body. Prof. Simon Newcomb, in a series of articles on the subject published in the *Independent*, says: “All experiments tend to prove that all the force taken into the body in the form of food is expended in the production of heat and muscular action; and if this be so, there is nothing left to be transformed into thought.” He criticises Spencer for citing in support of the co-ordination of thought and motion under the law of the persistence of force, a fact which disproves it: “He cites the well-known fact that strong mental action is accompanied by motion in the blood, evident by an examination of the face and proved physiologically in an abundance of ways. But this only disproves the theory, because, on the theory, thought ought to be accompanied not by an evolution, but by a disappearance of other forms of force.” “In every case we have reason to believe that, at each moment the total amount of force which has been put into the body from all external sources whatever, is exactly represented by the chemical changes and molecular motions going on among the molecules of the body.” In accord with this Prof. Fiske says of the resolving of mental phenomena into motion: “Those who really comprehend the import of modern discoveries in molecular physics are more thoroughly convinced than ever that any

* Discourse at the Scientific Reunion at Innsbruck, Sept., 1869.

such reduction is utterly beyond the bounds of possibility. . . . The dynamic circuit is absolutely complete without taking psychical manifestations into the account at all. No conceivable advance in physical discovery can get us outside of this closed circuit; and into this circuit psychical phenomena do not enter. Psychical phenomena stand outside of this circuit, parallel with that brief segment of it which is made up of molecular motions in nerve tissue. . . . One grand result of the enormous progress achieved during the past forty years in the analysis of both physical and psychical phenomena has been the final and irretrievable overthrow of the materialistic hypothesis.* Of the same purport are the words of Prof. David Ferrier: "We may succeed in determining the exact nature of the molecular changes which occur in the brain-cells when a sensation is experienced, but this will not bring us one whit nearer the explanation of what constitutes the ultimate nature of sensation. The one is subjective and the other is objective, and neither can be expressed in terms of the other."† Prof. Tyndall implies the same when he says, in an article on "Virchow and Evolution," that "the physical processes" (of the brain and nerve) "are complete in themselves, and would go on just as they do if consciousness were not at all implicated." So Lange, following Du Bois-Reymond, says: "We must rise to the conclusion that the whole activity of man, individuals as well as peoples, might go on as it actually does go on, without the occurring in any single individual of anything resembling a thought or a sensation. . . . If we supposed two worlds occupied by men and their doings, with the same course of history, with the same modes of expression by gesture, the same sounds of voice for an observer who could hear them . . . the two worlds to be exactly alike, with only this difference that in the one it is all machinery running down like an automaton, without any consciousness, without any thought or feeling, while the other is just our world; then the scientific formula for these two worlds would be entirely the same. To the eye of exact scientific research they would be indistinguishable."‡ In further carrying out this supposition Du Bois-Reymond says: "A mind which should know for a very small period of time the position and movements of all the atoms in the universe might derive from these, in accordance with the laws of mechanics, the whole past and future. It could, by an appropriate treatment of its world-formula, tell us who was the Iron Mask, and how the steamship 'President' was lost . . . would read in its equations the day when the Greek cross will glitter from

* Cosmic Philosophy. Vol. II., pp. 440-443.

† Function of the Brain, Chap. xi.

‡ Geschichte des Materialismus, B. II., Sect. 2, Chap. i.

the mosque of St. Sophia, or when England will burn its last lump of coal."

Thus physical science declares that the molecular action of the brain is a closed circuit from which conscious feeling and thought and all mental phenomena are excluded. The whole force is accounted for by the physical effects which would be just the same if there were no mental phenomena.

Evidently, then the mental phenomena, although they are observed and undisputed facts, remain entirely unaccounted for. The mechanical theory, in whatever form, fails to account for conscious life and much more for conscious personality. In every organism mechanical processes and structures are found which accord with mechanical laws like similar arrangements in inorganic matter. Besides these are mental phenomena which cannot be transformed into motion nor explained by mechanical laws. Here in the living organism are two processes going on, one mechanical, the other mental; they are coincident in time; but so far as physical science can see, the latter is entirely distinct from the former and entirely inexplicable by its mechanical laws. Mr. Huxley speaks of "conscious automata," a phrase which explains nothing but merely sets the two processes before us in their irreducible distinctness and parallelism.

Obviously the proper course of the scientist here is to recognize these phenomena and the fact that his theory does not explain them, and to bring his theory into conformity with the facts; and if he finds that physical science cannot explain them, he should acknowledge the reality and necessity of mental science. Instead of this he pictures a world of unconscious automata acting just as conscious beings do in this world and insists that the formula of science is entirely exhausted in the former, and science can discern no difference between them. When it is conceded that mental phenomena admit of no mechanical explanation, they are simply ignored and the mechanician goes on with his explanations of the universe as if no such facts existed, and gravely propounds his mechanical exposition as setting forth and explaining everything in the universe which has any claim to scientific recognition. But in reality if he is to ignore either it should be the facts of mechanism rather than the facts of consciousness. Let us imagine the supposition just quoted to be realized. The world exists as now. The men who people it are going on as now with their wars, their planting and building and navigation, their great industrial inventions and enterprises, they buy and sell and get gain, they have music and dancing, they write, and print, and read books and periodicals, they have schools and colleges, they have kings and parliaments, they discuss and carry on great reforms, they laugh and weep, all the expressions of anger,

fear, joy, courage and other emotions, in face and attitude, are the same as now; they marry, have children, die and bury the dead; but it is all automatic, without knowledge, or consciousness, or feeling. It is evident that the true reality and significance of the world would be gone; it would be all a mockery, were it not that in absence of all consciousness the very mockery would be unreal. On the contrary if the same were realized without matter in pure idealism in human consciousness, the essential reality and significance of the whole would remain. If then either of these parallel world-processes is ignored, what reason is there to justify us in ignoring the conscious and recognizing only the automatic?

4. This being the case, materialism is refuted. Materialism is essentially the dogmatic assertion that all phenomena are the manifestations of matter and force and are accounted for by them. Mental phenomena are realities which materialists do not deny, but which they try to account for as manifestations of matter and force. But they are proved to be not the manifestations of matter and force and not accounted for by them. Says Lange: "The gulf between (thought and the molecular motions of the brain) is as great now as in the days of Democritus. . . . It will be forever impossible for science to find a bridge between these motions and the simplest subjective feeling of man."* In the Preface to his Belfast Address, after speaking of the processes by which knowledge of the material world is attained, Tyndall says: "When we endeavor to pass by a similar process from the physics of the brain to the phenomena of consciousness, we meet a problem which transcends any conceivable expansion of the powers we now possess. We may think over the subject again and again; it eludes all intellectual presentation, and we stand at length face to face with the incomprehensible." In his address before the mathematical and physical section of the British Association in 1868 he says: "The passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. Granted that a thought and a definite molecular action in the brain occur simultaneously, we do not possess the organ nor apparently any rudiment of an organ which would enable us to pass by a process of reasoning from the one phenomenon to the other."† These are declarations not only that the human mind has not yet succeeded in correlating mental phenomena with molecular motion, but that by no conceivable expansion of its powers will it ever be able so to do. These represent the conclusion of physical science on the subject. And this conclusion implies that materialism as a philosophical theory of the universe is an entire failure.

* *Geschichte des Materialismus*. Vol. I., S. 15, 16.

† *Fragments of Science*, p. 119.

2. IV. My second answer is that the physical phenomena recognized by science as concomitant with mental phenomena are themselves, as explanations of the mental phenomena, inconceivable and involve insuperable difficulties.

1. Such difficulties inhere in the physiological explanation of memory by the registration of sensations. Every sensation, emotion, and thought registers itself by leaving an abiding imprint of itself on the brain, through which it is recalled in memory. But the impassable chasm, which we have found between the original sensation or thought and the molecular action of the brain, remains impassable between the mental act of memory and the supposed registration. The imprint registered on the brain has no resemblance to the feeling or thought and cannot be identified with it. Such an imprint can represent a thought only as a symbol, like a word written or spoken, it cannot do it by a representation, like a picture or image. If we remember through a registered imprint, there must be a mind reading and interpreting the registered signs. So all the phenomena of memory remain unexplained; they lie outside of the register in the brain.

But if this registration explains memory, since it abides continuously in the brain why is not the memory continuous in the consciousness? Why do past mental acts remain unremembered for years, and then suddenly re-present themselves in the consciousness? There must be some agency or cause other than the registered imprint. And further, when the past event reappears how do we know that it is the reappearance of the past? And finally, how is a registration possible, since the molecules are incessantly in motion and soon pass away from the brain entirely?

2. Similar difficulties are involved in the explanation of the unity of consciousness. The brain is composed of a multitude of atoms in perpetual motion. But multiplicity is not unity, and gives no hint of explanation how these multitudinous atoms can give the idea of personal individuality. So Du Bois-Reymond: "It is absolutely and forever inconceivable that a number of carbon, hydrogen, nitrogen and oxygen atoms should be otherwise than indifferent to their positions and motions, past, present or future. It is utterly inconceivable how consciousness should result from their joint action."* Nor is it conceivable that molecular motions and their registration should explain the consciousness of personal identity; for the atoms are perpetually passing away; the matter of the body changes entirely every few years. What conceivable registration of impressions can in the slightest degree explain or account for the fact that an old man knows himself to be the same

* The Limits of Natural Science; Lecture before the German Scientific and Medical Association, Leipzig, 1872.

person that he was in childhood, when every material particle of his body has been changed many times in the period intervening?

3. The multitude of impressions registered on a minute surface is inconceivable as consistent with the essential space-relations of matter. When I know a man there must be a particular arrangement of the molecules of the brain in which he is as it were photographed on my brain. There must be also another and separate arrangement of molecules in which every other person whom I know is registered; and this must contain a distinct registry of all that is peculiar not only in the form of the person, but also in his character and history, so far as I know him; and also of all my feelings and thoughts respecting him. The same must be true of all horses, dogs, trees, buildings, and other objects which I know. If I know half a dozen languages, there must be an arrangement of molecules registering every word and every grammatical inflection and relation of the words, every idiom, and the contents of every book that I have read. If I have traveled, the map of all I have seen is registered in the brain. And while all generalizations and general names which I have formed must be registered in the brain, the registration is not abridged thereby, for every distinct sensation, feeling, thought, determination, action and utterance must have its separate registry. It is not merely the verb *amo* and its grammatical forms, but all the separate acts of repetition by which I learned them in childhood, all the slips of memory by which I mistook one form for another, all the feelings pleasant or otherwise attendant on the task, and all the separate notices of the word in reading and speaking. Consider what an immense number of molecules are moving in any one mental act, and then think of all these registered physically in some configuration of them, which abides undisturbed while thousands of new and complicated impressions are registered every hour without breaking up the combinations of molecules in which the innumerable previous impressions are permanently and distinctly registered. This is utterly impossible in consistency with the conception of matter and energy on which the physical science of our day is founded. And the more because neither the microscope nor any other means of scientific observation can detect the slightest trace of this registration. It is fanciful speculation beyond the sphere of observation and even of conceivability.

4. Closely analogous to this and presenting similar difficulties is the physiological theory of heredity. Of two microscopic germs one develops into a horse and another into an animal of a totally different kind. The old explanation, which regarded the acorn as containing a miniature oak, and that as containing a still smaller one and so on through germs of whole generations of future trees, is rejected as crude. Yet physiology still teaches that all the innumerable quali-

ties of the animal and the peculiarities by which it is distinguished from other animals are strictly present in the germ. If evolution is true, this microscopic germ has also registered in its structure the impressions made on its ancestors for innumerable generations; and also it contains gemmules or whatever these physical characters be called, to be transmitted to innumerable subsequent generations. And atavism implies the further difficulty that these gemmules may pass latent through several generations and in a succeeding generation become active and reproduce the ancestral trait. The whole variety of properties and functions of the full-grown animal and its posterity are supposed to exist in the peculiarities of structure of an infinitesimal germ. A further difficulty is that the effect is immeasurably greater than the cause; one acorn produces millions of oak trees. There must be something besides the structure of the germ and the force which manifests itself in motion; something which cannot be explained by matter and force as commonly apprehended in their essential space-relations.

Some physiologists attempt to escape this difficulty by supposing a "structureless germ." Analogous is Du Bois-Reymond's supposition of "a primitive substance devoid of qualities;" but a substance not merely extra-sensible or beyond the reach of our senses, but devoid of all qualities which in their nature are perceptible, is not matter, for it does not occupy space and is not contained in it. It is a common sophistry and a common self-deception to present as a generalization what in fact is merely calling two totally unlike things by the same name. The result is a mere bridge of words over the chasm which separates the things. And thus predicating of a thing what is incompatible with its nature the words become meaningless; "substance without qualities" is as real nonsense as "yellow virtue" or "a pound of joy." Scientists too often exemplify this sophistry or self-deception. In not a few of the speculations connected with physical science, the idea of material body is changed by ascribing to it attributes incompatible with its essential properties.

3. V. Since mental phenomena cannot be correlated and reciprocally convertible with molecular motion under the law of the persistence of force, there remains no explanation of them by matter and its energy, and they are rightly acknowledged to be facts entirely beyond the sphere of physical science. They must either remain without scientific explanation, or we must recognize, as legitimate and distinct from physical science, the science of mind.

At this point dogmatic materialism, which affirms that nothing exists but matter and motor-force, is refuted; and evolution cannot save it; for since mentality is not convertible with motion, the mere evolution

of matter and motor-force cannot have originated it. Only two courses remain open to those who deny the existence of spirit. One is to accept both the phenomena of mind and those of matter as ultimate facts; to regard them as two lines of action parallel in a pre-established harmony, having no identity, or similarity, or point of meeting, a parallelism which we accept as a fact but cannot, either empirically or metaphysically account for or explain. But it is impossible for the human mind to rest in a final dualism like this. By the necessity of its constitution it must continue its search till it can think of the all in the unity of a rational system. Such a dualism is a case of unstable mental equilibrium in which the mind cannot persist.

The other way of attempted escape is by assuming the existence of some substance having the properties of both mind and matter. Its crudest form is the doctrine that atoms may be endowed with sensation. But the atomic theory gives us matter in its strictest and most distinctive sense; to predicate both material and mental phenomena of atoms is to predicate of them properties which are incompatible and contradictory and so to change the significance of matter and to use words without meaning. And, as Lange suggests, such a theory, could it ever be carried out, might end in dropping the atoms and their vibrations altogether, like a scaffolding when the building is completed. Besides, Monism can attain its synthesis of the all in one only by starting with the "*substantia una et unica*." If it starts with atoms it has atoms of sixty-four different kinds, which, since substance is known only by its properties, would be sixty-four different kinds of substances; and in addition to these there is the ether. Atomism is incompatible with Monism. If, with Prof. Bain, we suppose the matter which we perceive, the human body for example, to be "one substance with two sets of properties, two sides, the physical and the mental—a *double-faced unity*,"* we have the same difficulty; since the body is composed of atoms and we must also predicate of it contradictory properties. Thus again the explanation is attempted by applying the same name to things that differ and so using words without significance. If escape from the dualism is attempted by the pantheistic supposition of the "*substantia una et unica*" with its two attributes of extension and unconscious thought, no relief is gained.

There remains only the agnosticism of Spencer. The phenomena both of mind and matter must be referred to an unknowable power which transcends them both, and of which both mind and matter are manifestations. Yet this is not an Unknowable, for Mr. Spencer designates it as a Power, spelled with a capital P; he says it is omnipresent

* Mind and Body, p. 196.

and underived, and therefore we necessarily infer that it must be self-existent and eternal; and it is "manifested" in the phenomena of both matter and mind. This so-called unknowable he uses as a symbol, like an algebraic x , by which he comes to the result that thought is transformed motion—a result which science rejects. He says: "Those modes of the Unknowable which we call motion, heat, light, chemical affinity, etc., are alike transformed into each other, and into those modes of the Unknowable which we distinguish as sensation, emotion, thought; these, in their turn, being directly re-transformable into their original shapes."* Thus the Philosophy of the Unknowable withdraws into the covert of human ignorance and professes to perform in that darkness a transformation impossible in the light of knowledge.

Therefore it is evident that, while physical science is unable to correlate thought, feeling and determination with motion as reciprocally convertible under the law of the persistence of force, it is also unable to account for and explain the phenomena in any other way.

VI. The existence of spirit accounts for and explains the mental phenomena and avoids the difficulties of the materialistic assumption.

1. Natural science, as we have seen, finds impassable limits in two directions; it cannot account for and explain mental phenomena, and especially the facts of personality; and on the principles of mechanism it cannot account for and explain the phenomena of matter and force. We find two spheres of reality, the objective which is perceived in sense, and the subjective which is the mind in its conscious operations having knowledge of the objective. Physical science can explain and account for neither of these spheres themselves nor their reciprocal connection and action. It sees their parallelism but cannot find their point of meeting and interaction.

2. The supposition of the existence of spirit enables us to explain and account for these spheres, and to bring them both within our knowledge in the unity of a system. If the limits of the empirical science of nature are the limits of all human knowledge, then the human mind can never transcend these bounds. It finds the horizon of the knowable very near the eye. But the foregoing chapters have demonstrated that man's knowledge is not limited to sense-perception, nor its objects to matter and motion, nor its reflective methods to the empirical. Man has knowledge of himself endowed with the attributes of personality; and with this knowledge he can pass beyond the limits of physical science and its empirical methods. If man is a personal spirit acting through an organized body, the parallelism of

* First Principles: p. 280, § 82.

mental phenomena with molecular action of the brain is explained as the manifestation of spirit through the organization with which it is connected. The truth that the absolute and ultimate ground of the universe is Energizing Reason gives us the conception of the universe existing as an ideal eternal in the Reason, and realized by the energizing of the Reason continuously and progressively expressing its ideals in finite forms under the limitations of space and time. In the two words *Energizing Reason* we have attained intelligibly the synthesis which Spencer teaches must exist in the Unknowable Absolute in which is the source alike of matter and of mind, and which Bain seeks to find in his double-faced substance having the attributes of both matter and mind. For here is *Reason* which in its essence is Subject, and which eternally knows the object in its own archetypal ideals. And here is *Energizing Reason*; and this includes the Energy which reveals itself continuously and progressively in the universe, and the Intelligence which ever directs its multitudinous atoms in action co-ordinated and converging on what we can think only as a prearranged result. And here is a universe of matter and mind synthesized in the unity of a system in which the effusion and direction of energy are continuously and progressively realizing rational results; and these results when investigated and described by the human mind are found to give astronomy, chemistry and other natural sciences, moral systems and laws, æsthetic ideals and culture, great civilizations, and the lineaments of God's kingdom of righteousness and good-will forming itself progressively amid the changes and confusions of human life. These realities are found in the universe. Matter and force cannot account for them; physical science with its empirical methods cannot explain them. But the existence of Energizing Reason as the Absolute Ground of the universe explains and accounts for all. It and it alone gives comprehensive science, in its three stages, Empirical, Noetic and Theological, which alone is able to recognize, account for and explain all the facts which we observe in the universe.

3. The existence of personal spirit is therefore necessarily assumed. If the facts of personality and of the broader sphere of consciousness, and their relation to physical phenomena could be explained by matter and force, then we might doubt which of two equally sufficient causes was the real one. But since confessedly these facts cannot be accounted for by matter and are accounted for by spirit, the mind in accordance with the constituent elements of its own rationality must believe that spirit exists. So Spencer says: "When on decomposing certain of our feelings we find them formed of minute shocks succeeding one another with different rapidities and in different combinations; and when we conclude that all our feelings are probably formed of such units of con-

sciousness variously combined, we are still obliged to conceive this unit of consciousness as a change wrought *by some force in something*. No effort of imagination enables us to think of a shock, however minute, except as undergone by an entity. We are compelled, therefore, to postulate a substance of Mind which is affected, before we can think of its affections.”*

Were it, then, only a case of hypothesis of a cause of observed phenomena, as we postulate an ether to account for light, the hypothesis of the existence of spirit would be fully sustained. So says Dr. J. R. Mayer, in the Discourse already cited: “There are three categories of existence, matter, force and the soul or the spiritual principle. When once we have succeeded in realizing that there are not only material objects, but also forces . . . as indestructible as the substances of the chemist, we have but one step further to take, and that perfectly natural, to recognize and admit spiritual existences.”

4. In self-consciousness man has knowledge of himself as an individual persisting in identity and endowed with the attributes of personality. Our knowledge of our own personality is not attained by hypothetical reasoning, but is immediate in our own self-consciousness. Not that self-consciousness answers all questions as to the constitution of spirit, whether for example it is simple or complex, but it does give the reality of the personal, individual, ever identical self. Thus the knowledge of self is no hypothesis, nor theory, nor mere inference, but is immediate knowledge of the highest certitude. It is knowledge without which all other knowledge is disintegrated and disappears. For if I do not know myself as persisting in identity I cannot know anything that is past, nor apprehend any realities in a unity of thought. The materialistic explanation of memory and of the unity of consciousness fails in the total failure of materialism to explain any mental phenomena.

5. An objection is urged that the existence of disembodied spirit “lies wholly outside of the range of experience.”† So far as the objection is that the existence of spirit disembodied is beyond the range of our experience, it is not pertinent to the issue before us. This I have already shown. On the one hand, if finite spirit never manifests itself except through some material medium, this does not invalidate our position that a spiritual power must be postulated to account for the known facts of personality, and also that we have immediate knowledge of such spiritual power in the consciousness of self. On the other hand, to account for facts not otherwise accounted for, we may assume that spirit, such as is thus known to us in the body, may exist, with all

* Psychology. Vol. II., p. 626, § 272.

† Prof. Fiske: Unseen World, p. 50.

its essential personal attributes, disembodied. And this is a legitimate scientific postulation, precisely like that of physical science when, to account for facts of matter and motion perceived by the senses, it postulates atoms, molecules and ethers which are entirely imperceptible and in that sense beyond experience. If now it is objected that disembodied spirit is beyond experience and therefore cannot be postulated in an hypothesis, it is true equally and in the same sense that atoms, molecules and ethers are beyond the range of experience. But if we look further we see that neither the one nor the other is beyond the range of experience in such sense as makes the postulation illegitimate or unscientific. For, in the latter hypothesis, the atoms, molecules and ethers are supposed to retain the essential properties of matter as already known in experience, although existing in forms and under conditions of which we have not had experience. And, in the former, the spirit retains the essential attributes of personality as already known in experience, although existing under conditions of which we have had no experience.

6. It is also objected that mental phenomena must be resolved into molecular in order to be cognizable by science. The objection, in order to be pertinent, must deny that consciousness is a source of knowledge. It must affirm that the existence of personal or spiritual being is beyond the range of experience; and in order to make this assertion good, must deny that consciousness is any part of our experience.

This seems to be the position taken, not by materialists alone, but by some scientists who disclaim materialism. Matter and motion, or the energy which manifests itself in motion, constitute the objective sphere of knowledge. These alone are objects of science. The sphere of consciousness is the subjective. This is either explicitly or implicitly excluded from science. It is an object of scientific knowledge only so far as we can reduce it to terms of matter and motion through the molecular action of the brain. But, when it is seen that consciousness cannot be identified with these, it is abandoned as beyond the limits of science and not an object of legitimate scientific investigation. "Only when we resolve our sensations by abstraction into those simplest elements of extension in space, of resistance, and of movement do we obtain a basis for the operations of science." But so far as it is found impossible to identify self-consciousness with objective reality, it is excluded from science. If there is no such thing as self-consciousness in the objective sphere, it is, strictly speaking nothing. "Subjective existence is not the true, proper existence with which alone science is concerned." It is substantially along this line that Du Bois-Reymond defines "the limits of natural science." And all who regard natural science as comprehending all

science must either resolve mental phenomena into molecular action or else exclude them entirely from scientific knowledge.

The first answer to the objection presented in this form is that it falls back upon the position of Comte, who affirms that consciousness is not a source of scientific knowledge. This has been found too narrow a basis for science, and when nakedly stated is commonly rejected by scientists. These two spheres of knowledge are presented to the mind in one and the same mental act. It is a wholly arbitrary and unreasonable proceeding to accept the one and reject the other, or to insist that mental phenomena are not objects of science until they can be presented as objective realities, as phenomena of matter and motion. It is an *a priori* and unscientific declaration of what it is possible to know, instead of a docile acceptance and investigation of facts actually presented to our knowledge. So Lange: "The very undertaking to construct a philosophical theory of things exclusively upon the physical sciences must in these days be described as a philosophical one-sidedness of the worst kind."*

A second answer to this form of the objection is that of the two, the subjective knowledge is, if any distinction is to be made, the best warranted knowledge. The remark has often been made and is obviously true that if we must choose between materialism and idealism, between the knowledge of matter and motion, and the knowledge of mind and conscious thoughts and feelings, the latter has always the better warrant. A person or spirit may have its "objective" within himself in his own thoughts, character or ideals, and thus can complete within himself the circuit recognized in the first law of thought, that knowledge implies a subject knowing, an object known, and the knowledge. Sensation and consciousness are immediate, but the knowledge of molecular movement is mediate through thought, "triple ideal," as Spencer describes the molecule. Accordingly Mr. Spencer says: "It may be as well to say here once for all, that were we compelled to choose between the alternatives of translating mental phenomena into physical phenomena, or of translating physical phenomena into mental phenomena, the latter alternative would seem the more acceptable of the two." So Prof. Fiske: "While the Inscrutable Power manifested in the world of phenomena cannot possibly be regarded as quasi-physical in its nature, it may nevertheless be possibly regarded as quasi-psychical. . . . We may say that God is Spirit, though we may not say, in the materialistic sense, that God is Force."†

A third answer is that the *knowledge* of the objective is itself sub-

* Hist. Materialism. Transl. II. 302.

† Cosmic Philosophy. Vol. II., pp. 448, 449.

jective; and that the knowledge of the objective disappears if the knowledge of the subjective is not real. This very word *objective* implies as much, since matter and motion are called objective because they are objects of perception and thought. What do we know of atoms, if we take the materialistic explanation of thought, except as the remains of faded sensations by which the mind has formed a concept of them? The last result of physical science in knowing the objective is in finding bulk, weight, distance, velocity and law of movement mathematically expressed. But mathematical measurements are nothing but pure forms of mind. The *Mécanique Céleste* of Laplace is a description of the universe, and that description is in mathematical forms created solely by the mind. Is it therefore an anthropomorphic description of the universe, revealing only the subjective, and unscientific? Plainly if the subjective consciousness and personality are excluded from scientific knowledge, the phenomena of matter and motion are excluded also.

We may find a further answer to the objection in the analogy of matter and force. The phenomena of matter as existing in and occupying space and the phenomena of motion manifesting force, are inseparable; yet like those of mind and matter they are parallel. We find that force cannot be accounted for as caused by matter; we have seen the insuperable difficulties in the supposition that force is an inherent property of matter, that matter by attraction or repulsion is continually effusing energy into the universe without expenditure or resupply. But, on the other hand, the dynamic theory of matter is conceivably true, and it is possible to account for matter by force.

Looking now at the parallelism of the relation of mind to matter and force with the relation of force to matter, we find that mental phenomena cannot be identified with or explained by matter and force, but that matter and force may be explained by mind. For our idea of motion and force is derived from the action of our own wills and the motion caused by it. Attraction and repulsion are only our own pull and push transferred to the movements of nature. And the tendency to the dynamic explanation of the universe is a tendency to find its explanation in mind, in an Energizing Reason, continuously the efficient and the directive cause of the universe and its ongoing.

Spirit and its phenomena, therefore, are not beyond the range of experience, but are the deepest realities of experience, without which the objective could never be an object of experience or knowledge.

VII. The theory of the correlation of the facts of personality with molecular motion not only does not account for these facts but is entirely incompatible with them in their essential significance. For if this theory were true man would be merely a natural product and all his

acts would be necessitated in the fixed course of nature, like the falling of stones, the flowing of water, and the consuming of fuel by fire. Rational free-will would be impossible, and without free-will moral obligation and responsibility, moral law and government, all that belong to a rational and moral system, would also be impossible. We should be driven to the conclusions reached by Mr. Atkinson and Miss Martineau in their "Letters on the Laws of Man's Nature and Development": "Instinct, passion, thought are effects of organized substances." "All causes are material causes." "In material conditions I find the origin of all religions, all philosophies, all opinions, all virtues and spiritual conditions and influences, in the same manner that I find the origin of all diseases and of all insanities in material conditions and causes." "I am what I am, a creature of necessity; I claim neither merit nor demerit." "I am as completely the result of my nature and impelled to do what I do, as the needle to point to the north or the puppet to move according as the string is pulled." "I cannot alter my will or be other than what I am, and I cannot deserve either reward or punishment."

But the facts that I am a rational free-agent and the subject of moral obligation and responsibility, and am under moral law and government, are facts of the highest certitude. If any proposed scientific theory is inconsistent with them, the inference is that the theory is unscientific and false because it is not consistent with known facts, not that the facts are unreal because they are inconsistent with the theory. These incontrovertible facts demonstrate the existence in man of a power other than matter and force.

In a cemetery near Stirling Castle, in Scotland, is a monument to two girls who, in the time of persecution, were tied at low water mark to be drowned by the rising tide if they did not renounce their religious convictions. For hours they watched the slowly rising waters, knowing a word would save them, but that word conscience within them forbade them to utter. Something within them above the body and its movements freely left the body to die rather than be false to principle, to duty, and to God. Many Christian martyrs have endured imprisonment and repeated torture on the rack before they suffered death. In the darkness, dampness and filth of a dungeon they have looked forward to the torture, knowing they could escape it if they would recant. They have been tortured as long and as much as their tormentors could inflict without killing them, and have then been remanded to their dungeon; and when sufficiently recovered tortured again and then again, and last they have been burned at the stake. All the preparatory imprisonments and tortures were fitted to destroy the nervous energy, to prostrate the strength, and

break down the resolution. Were there nothing concerned but molecular motions of the brain they would have grown feeble and given way. But there is a spirit in man which freely consigns the body to suffering and death rather than turn from truth and right, and which remains unweakened in its purpose to the last moment of consciousness as all the bodily powers decay.

If it were possible for the phenomena of personality to be correlated with motion under the law of the persistence of force, then the amount of force liberated by thinking would be inconceivably great. Science recognizes grades of force. A unit of electric or magnetic force is equal to many units of the force of gravity. A common small magnet lifts iron filings; to enable it to do the same by gravitation-attraction, its density would have to be increased till it weighed at least a billion of pounds. Chemical affinity is supposed to be a force of a still higher grade. Faraday calculated that the force expended in decomposing a drop of water is more than that of the electricity which would charge a thunder-cloud. The force expended in producing nine pounds of water by the combination of oxygen and hydrogen is equal to that of a ton weight falling 22,230 feet. Prof. Tyndall says: "I have seen the wild stone avalanches of the Alps, which smoke and thunder down the declivities with a vehemence almost sufficient to stun the observer. I have also seen snow-flakes descending so softly as not to hurt the fragile spangles of which they were composed. Yet to produce from aqueous vapor a quantity of that tender material which a child could carry, demands an exertion of energy competent to gather up the shattered blocks of the largest stone avalanche I have ever seen and pitch them to twice the height from which they fell." Vital force must be of a still higher order; for the action of chemical affinity is suspended during life but asserts itself in the decomposition of the tissues so soon as life ceases. The force manifested in rational free-will would be still higher. Every rational free act would therefore give forth into the universe an immeasurable amount of force surpassing that of a multitude of thunder-storms. And if the theory of the correlation of personal action with molecular motion and its re-transformation into motion were true, then the prayers of Christian people in their assemblies every Sunday all the world over would actually give out into the universe an energy that would be immense. This sets in a striking light the impossibility of the correlation of personal acts of rational free-will with motion; and at the same time shows that the supposition, if true, would involve consequences never dreamed of by the materialist.

✓

§ 80. Third Materialistic Objection: from the Theory of Evolution.

A third materialistic objection to the existence of personal or spiritual beings is, that all that exists has been evolved from primordial homogeneous stuff under the laws of matter, force and motion; that thus personality and spirit are excluded from the universe and have no existence either in man or God.

I. We must first distinguish the materialistic theory of evolution from the scientific. The objection assumes that this theory in its essence includes materialism; and this is the prevalent impression. This is not surprising; for some of its most widely known advocates are materialists or agnostics, and present the theory as essentially materialistic. But so far as it is a legitimate theory of empirical science it must declare only how nature goes on, not how it originated and what is its ultimate ground. And so its most judicious advocates present it. Thus presented it is the theory that the existing arrangement of the physical universe is the result of a continuous and progressive evolution from simpler and lower to more complicated and higher conditions and forms; and it is an attempt to declare the laws in accordance with which the evolution goes on. It results from the efforts of science to find out how nature has been going on in the past and thus to extend knowledge of physical processes and laws through time as the discovery of the law of gravitation extended it through space. From ancient times in the prosecution of such inquiries various suggestions in the direction of evolution have at different periods been made. The present theory is an attempt with a larger knowledge of nature to give a more complete answer to these inquiries. The investigation is perfectly legitimate within the sphere of empirical science. Neither philosophy nor theology has anything to fear from any facts which it may discover or any invariable sequences or laws of nature which it may establish. A law of evolution, legitimate within the sphere of empirical science, would be consistent with personality, would extend our knowledge of law and order in nature through time as the discovery of the law of gravitation extended it through space, and would favor the teleological view of nature by presenting to us the material universe as a whole in its entire evolution progressively realizing a rational ideal and end. It would be in general accord with the observed fact of the appearance of higher and higher orders of organic beings in the successive geological periods; with the philosophical principle that the manifestation of the absolute or infinite in the finite must be progressive and at any point of time incomplete; with the theological truth that the historical revelation of God has been progressive according to the capacity of an age to receive

it; and with Christ's teaching that the advancement of his kingdom must be progressive after the analogy of organic growth, first the blade, then the ear, after that the full corn in the ear.

Mr. Spencer's generalization is that the development and growth of an organic germ present the type and law of the evolution of the universe: "this law of organic evolution is the law of all evolution."* In incubation the homogeneous yolk is first diversified into lines and parts and then these are united in the organic unity of the chicken. This, then, according to Spencer, is the type of the evolution of the universe: the homogeneous passing into diversity and thence into a unity of the complex. We have seen that thought consists of apprehension, differentiation and integration. It may be that this is the necessary law of thought because it is also the law of the constitution of things which are the objects of thought. If this is the law according to which the material universe has come to its present arrangement, still it declares only the uniform factual sequence from homogeneity through diversity to a larger and complex unity, and so on through multiplying diversities and unities forever. If this is the law of the progress and development of the individual man, still it declares only the uniform factual sequence from the simplicity of infancy through the development of diverse powers and susceptibilities to the realization of unity in the rational control and direction of all these diverse energies in the free personality of the man. If this is the law of the formation of moral character, still it declares only the factual sequence from the simplicity and innocence of infancy through the development of many impulses, desires, affections and energies, involving many temptations and inward conflicts, to the unity of all the diversity in the life of love. If this is the law of the development of civilization and the progress of society, still it declares only the factual sequence from the comparative simplicity of savagery through the development of the many-sidedness of man as to power and capacity, as to wants and the power of satisfying them, to the unity of a civilized community living peacefully under law. If this is the law of the organization of political society, still it only declares the uniform factual sequence from the simplicity of the family and of patriarchal government through many diversities and conflicts and disintegrations to the *e pluribus unum* of the government of the United States in which the greatest complexity and freedom are united in the firmest union. In all these cases we simply affirm the fact as to how the world goes on; we affirm nothing as to how it began or how it is sustained and directed, or what is the ultimate ground on which in all its changes it rests; nothing

* First Principles, § 43, p. 148.

which denies the personality of man or the existence and immanent action of God. And if the progress of man as an individual and of society is always accordant with this law, the fact is no more incompatible with his free personality and the immanent presence of God than are the facts that his motions are limited by the natural laws of gravitation and his thinking regulated by the rational principle that every beginning or change of existence must have a cause. The point made by the theist is not that the law of gravitation, of the persistence of force, of evolution, or any other law of nature fails to declare a uniform factual sequence in nature, but that every one of them brings the investigator face to face with facts which the law is incompetent to account for or explain, and thus reveals in all the operations of nature a power which transcends nature. And it is not merely that there must be a power above nature to account for its origin, but that in every interaction and process of nature according to its laws, the necessity and reality of a power above nature are revealed.

I anticipate that the science of the physical universe is to be established in the line of thought which the theory of evolution opens and in accordance with its general idea. No interest of theology prejudices me against it; for I see no conflict between such a theory within the legitimate limits of empirical science and theology; on the contrary, at various points I find it helpful in removing difficulties and elucidating and vindicating theological truth. The objections against theism which it has occasioned are not from evolution as a scientific law of nature, but from the materialism of which it has been made the vehicle.

II. Although the theory of evolution has already been found to accord with many facts and bring them into unity, and thus has acquired probability, I cannot think that as yet it has been either apprehended in its full significance or scientifically established. So Prof. Le Conte says: "I do not agree with those who seem to think that we already know all, or at least the most important factors of evolution. On the contrary, I am quite sure that the most fundamental factors are still unknown; that there are more and greater factors than are yet 'dreamed of in our philosophy.' But evolution of some kind and according to some law which we yet imperfectly understand, evolution affecting alike every realm of nature, a universal law of evolution, is, I believe, a fact which is rapidly approaching universal recognition."*

1. The law of evolution in some sense conditions all other laws of nature. As declaring how nature has been going on through all time

* Princeton Review, 1881, p. 159.

it in some sense conditions all the actions and processes of nature in space. The forces of nature acting according to their laws in space have been acting thus through all time; and by these forces and in accordance with these laws the evolution has been going on. The theory of evolution must, therefore, take up into itself all these forces and laws and declare to us in scientific form the law of all laws, in accordance with which all the forces of nature acting according to their subordinate laws in producing specific effects, have yet been acting in concert through all time realizing an immense and most complicated ideal in the slow but continuously progressive evolution of nebulous matter into a Cosmos. It is not surprising that the human mind has not scientifically established such a law as this, nor even clearly and definitely enunciated it. Even if the theory of evolution is a grand insight of genius, it is not surprising, especially considering how recently it was announced, that it remains neither adequately formulated nor proved; and that only fragments, which may ultimately find place in a comprehensive theory, seem to be assuming the definiteness and certainty of scientific facts.

2. The theory of evolution includes four subordinate theories, each of which must be scientifically established before the theory of evolution can be accepted in its entirety as a scientific law of nature. It cannot be affirmed that all of them are thus established. They are the following: a nebular hypothesis in some form; the persistence of force; Abiogenesis or spontaneous generation; the Darwinian theory of the development of species.

The nebular hypothesis as commonly applied to our solar system assumes that all the matter in it was in its beginning nebulous and diffused through the space which the system now occupies. This theory is now generally accepted by astronomers not merely as a convenient working hypothesis, but as in all probability the true history of the formation of the solar system. But against this the weighty objection is urged that the actual velocities of the rotations and revolutions of the sun and its planets are vastly greater than those necessarily deduced from the hypothesis, and that various other known astronomical facts are incompatible with it. J. B. Stallo says: "The cumulation of difficulties presented by the nebular hypothesis has become so great and is beginning to be so extensively realized, as to develop a tendency to modify or supplant it by another hypothesis, which may be called the hypothesis of meteoric agglomeration."*

The nebular hypothesis of Laplace was limited to our solar system. This of course is too narrow for a cosmical theory, which must extend

* The Concepts and Theories of Modern Physics: pp. 277-286.

to all suns and systems and derive all their nebulae from an all-comprehending homogeneous stuff. The latter was the hypothesis of Kant and is accepted by Spencer, Haeckel and other leading evolutionists. Mr. Spencer says: "Evolution is a change from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity, through continuous differentiations and integrations." He explains that in it the elemental unchangeable units of various orders are "so uniformly dispersed among each other that any portion of the mass shall be like any other portion in its sensible properties."* This homogeneous stuff is limited and definite in quantity, is in unstable equilibrium, and when change begins the forces become multiform and multiply the changes. He sometimes describes the evolution as "a redistribution of matter and force," implying that the evolution is only a rearrangement of the diversified elements and potencies which were originally blended in the homogeneous.

The observed existence of nebulae gives support to some theory like this, sufficient at least to justify the assumption of the nebulous matter as what Newton calls a *vera causa*, and to justify the hypothesis as a legitimate scientific hypothesis and not a mere vagary of the fancy. But embracing as it does the universe in its entire history from the beginning, it cannot admit of complete verification in the present stage of astronomical knowledge, and inevitably confronts us with many difficulties. For example, since the assumed nebulous matter, limited and definite, comprises the whole physical universe, and is broken up into suns and systems by cooling, the force dissipated in the cooling passes out of the universe into absolutely empty space. And since the nebulous matter of the universe is broken up into suns and worlds, why is there no change in the ether, which seems more than anything the very "thing in itself" of matter?† And since this nebula is the entire physical universe and is in equilibrium and therefore motionless, no force within it can originate the motion and no finite force from without can ever be incident upon it and cause any part of it to move. An equilibrium of the whole universe cannot be unstable but must be immovable forever. Of Abiogenesis Mr. Huxley says: "At the present moment there is not a shadow of direct evidence that abiogenesis does take place or has taken place within the period during which the existence of the globe is recorded."‡

Darwin's theory of the development of species, notwithstanding the facts and arguments accumulated in its support, seems yet to lack

* First Principles, § 57, pp. 216, 235, and Chaps. xii. and xiii.

† So Clifford says that in cooling down into one motionless mass the universe "would send out waves of heat through a perfectly empty ether." Lectures, etc., I. 221.

‡ Encyc. Brit. 9th Ed., Art. Biology, p. 689.

evidence at some points, and to be confronted with facts which it does not take up and explain. Prof. Gray says: "The essential types of our own actual flora are marked in the cretaceous period and have come to us without notable changes through the tertiary formation of our continent."* And Virchow, speaking of the evolution of man, says: "The old troglodytes, pile-villagers, and bog-people prove to be quite a respectable society. They have heads so large that many a living people would be only too happy to possess them. . . . We must really acknowledge that there is a complete absence of any fossil type of a lower stage in the development of man. Nay, if we gather together all the fossil men hitherto found and put them parallel with those of the present time, we can decidedly pronounce that there are among living men a much greater proportion of individuals who show a relatively inferior type than there are among the fossils known up to this time. . . . Every positive progress which we have made in the region of prehistoric anthropology has removed us further from the demonstration of this theory."† The variations produced by domestication disclose a certain susceptibility to variation, but the variation itself is the result of man's selection, not of natural selection. The argument from embryology, however striking, is nevertheless merely an argument from analogy. The question at issue is a question of *Phylogeny*, that is, of the evolution or origin of organic tribes or species; the facts observed are facts of *Ontogeny*, that is, of the evolution of an individual organism from its germ. The argument is merely by analogy that facts not observed in the evolution of species must be analogous to facts observed in the development of a germ into an individual animal. If we add the *taxonomic* series, the analogy is exhausted, with this result: living organisms are not only classified by resemblance, but also the classes or species arrange themselves in a gradation from lower to higher; the order of the appearance of the species in time has a general correspondence with the order of their gradation from lower to higher; and the development of the human embryo in its successive stages has a striking correspondence with the same gradation. But this analogy is far from proving that living organisms have been developed through all gradations up to man solely by the necessary action of matter and motor-force.

There are also facts which seem to contradict the theory, such as the sterility of hybrids, degeneracy, atavism, the tendency of domesticated varieties to return to the primitive type, the great geological breaks in the course of past life and the abrupt appearance of multitudes of new

* Address before Am. Scientific Association, 1872.

† Freedom of Science in the Modern State: A Discourse before the German Association of Naturalists and Physicians; Munich, 1878.

species. Astronomers profess to prove from data drawn from the nebular hypothesis that the time claimed as necessary for the evolution far exceeds any period during which it is possible that the earth can have existed as a globe capable of sustaining any organic life. Investigations in other spheres of knowledge seem to prove similar overestimates in the later periods of development. Quatrefages says: "Under the influence of Darwinian prejudices, men have begun to handle time with a strange laxity, and it has been affirmed that millions of years separate us from the glacial times. The deposits of silt in the lake of Geneva show that these times terminated less than 100,000 years ago."* The theory if true would be true of different species as well as of different individuals; the stronger species would exterminate the weaker, and all organic beings be brought into one species. The theory cannot account for the existence of sex, nor for the formation of new organs of any kind. As Dr. Carpenter says, in an article on "Mind and Will in Nature": "Natural selection or the survival of the fittest can do nothing else than perpetuate, among varietal forms already existing, those which best suit the external conditions of their existence; and the scientific question for the biologist is, what is the cause of *departure* from the uniformity of type ordinarily transmitted by heredity . . . and under what conditions does that cause operate?" Before the first mammal was born there must have been a mammary gland in the mother to provide its food, and the young one must at birth have had the instinct to suck or it would perish. How could natural selection in non-mammals develop either the organ in the former or the instinct in the latter? An animal in the process of transition from one type of organism to another, would seem to be inferior to the perfect animals of either, and on the principle of the survival of the fittest, would perish.

In studying the writings of evolutionists one cannot easily avoid the impression that the enthusiasm and in some cases the dogmatism with which the doctrine is propounded as scientifically established, arise from the satisfaction given to minds naturally seeking the largest unity, by the wide generalization of facts which the theory offers, rather than from the observation of facts and careful induction from them. Thus Prof. Hæckel admits that no instance of abiogenesis or spontaneous generation has ever been observed; and yet he insists dogmatically that it must be accepted as fact, because it is essential to the theory of evolution, which he supposes to be established in other spheres of observation.† Whatever this conclusion may be, it is not physical science. As the authors

* The Human Species: Appleton's Translation, p. 141.

† History of Creation, Transl. Vol. I., pp. 339-349. See *Generelle Morphologie der Organismen*, Vol. 1, p. 174.

of the Unseen Universe say, "It is against all true scientific experience that life can appear without the intervention of a living antecedent."*

3. The laws of evolution do not have the exactness, definiteness, and completeness of laws of nature scientifically expressed. For example, the laws of the development of species, commonly insisted on are these two: a tendency of a structure to vary indefinitely, and the tendency of its environment by its action on it to confirm and accelerate the variation in a specific direction. Prof. Fiske brings these under the general name of equilibration or adjustment, which he distinguishes as *external*, including adaptation and natural selection; and *internal*, including heredity, correlation of growth, use and disuse. There is a great contrast between evolution and its laws as thus presented, and the law of gravitation, or of chemical combination, or of mechanics. This lack of scientific precision is exemplified in Prof. Tyndall's somewhat famous description of the development of the eye: "The senses are nascent, the basis of all of them being that simple tactual sense which the sage Democritus recognized 2300 years ago as their common progenitor. The action of light in the first instance appears to be a mere disturbance of the chemical processes in the animal organism, similar to that which occurs in the leaves of plants. By degrees the action becomes localized in a few pigment cells, more sensitive to light than the surrounding tissue. The eye is here incipient. At first it is merely capable of revealing differences of light and shade produced by bodies near at hand. Followed, as the interception of light is in almost all cases, by the contact of the closely adjacent opaque body, sight in this condition becomes a kind of 'anticipatory touch.' The adjustment continues: a slight bulging out of the epidermis over the pigment granules supervenes. A lens is incipient, and through the operation of infinite adjustments, at length reaches the perfection that it displays in the hawk and eagle."† This certainly is not science. "Infinite adjustments" is a fine phrase, but it has slight resemblance to the law of gravitation with its mathematical exactness. He strides with seven-leagued boots from step to step in the process, giving us no glimpse of why or wherefore or how. No such process was ever observed; no fact sustains a single one of the assumptions; the whole conception and each particular in it is a figment of fancy. Nor even as a theory does it account for or explain any thing. Why does the sunlight develop an eye in one spot rather than another? Why does the epidermis "bulge out?" How does sunlight develop an optic-nerve? And how do vibrations of ether against an incipient eye or a perfect eye give rise to the utterly dissimilar phenomena of visual sensation? A similar criticism must be made of the laws of the survival

* Page 139.

† Belfast Address.

of the fittest and of natural selection; and of Mr. Spencer's laws of the instability of the homogeneous and of the multiplication of a force incident on it; and of his law which he says "follows inevitably from a certain primordial truth," that "the homogeneous must lapse into the heterogeneous and the heterogeneous must become more heterogeneous.*

4. Evolutionists, while insisting that the universe is merely mechanism, are obliged to resort to the different idea of organic growth in carrying out the theory.

The theory of mechanical evolution presupposes only matter and the force manifested in its motion, molar or molecular. The process consists solely of the rearrangement or redistribution of matter and force according to the laws of mechanics. This is the form in which the theory has commonly been held. Even Mr. Spencer, who has explicitly declared that the law of organic evolution is the law of all evolution, actually expounds it as the law of mechanism; he calls evolution the redistribution of matter and force. He drops the organic type till he comes to sociology. There he treats society as an organism not as a machine.

But this mechanical conception is not in harmony with the conception of nature necessary in any form of evolution. A machine is a finished product which admits no new part or function. Nature, as the evolutionist conceives it and as it actually is, is never a finished product but always receptive of new and higher forms of action, revealing higher powers, and realizing new and higher ends; it is always plastic, always progressive. A machine does not manufacture itself by factors within itself, but is manufactured by agents outside of itself. After it is made it does not run itself by agents within itself, but is run by a power without itself and for the accomplishment of an end external to itself. But the mechanical evolution represents nature as a machine, yet doing in these particulars just what it is impossible for a machine to do; for the factors in the evolution and all the products of their action are within nature itself. In these respects the conception of nature as a machine is foreign to the conception of evolution. Mechanical evolution is simply the development of what already exists into new forms. It precludes the addition of matter or force, not already in that which is developed. It is like disentangling a tangle of silk and winding it on a spool. If this is the meaning of evolution then the primordial matter must have contained every elemental substance, every physical energy and every power of mind which has made its appearance in the evolution, as well as the total quantity of matter, energy and mind which exists, or will ever exist, in the universe. We rightly argue that nothing could have been evolved from the primordial

* First Principles, p. 46, Chap. xv., 123.

nebulous matter which did not originally exist in it. But if this is so then the primordial matter is no longer homogeneous, but contains matter and mind and all their various properties and powers.

But the theory of evolution now current does not imply that the primordial matter contains all that is evolved from it; it implies progress and growth; it assumes the appearance of new and higher powers; wittingly or unwittingly the evolution is conceived in the type of an organic growth. If the original nebulous matter is really homogeneous, then its evolution into all the heterogeneous bodies, and energies and minds of the existing universe, must be by the agency of a power or powers other than itself, or else must be an effect without a cause. And here it is that in the development and application of the theory the idea of growth is substituted for that of evolution in its primitive and etymological meaning. Evolutionists, in unfolding and applying their theory, talk and write about mechanism, but think and argue about the very different process of germination and growth.

The fact that evolutionists cannot carry through their theory on the sole basis of mechanism demonstrates that, if evolution is a scientific fact, the true science of the universe is impossible on the basis of mechanism. The question whether nature is an organism or a mechanism has been discussed from ancient times. Since Descartes the mechanical theory has been very commonly accepted by scientists as at least their working hypothesis in scientific investigation. But the sensitivity of brutes and the conscious personality of man are facts in the universe, and it is scientifically demonstrated that they cannot be explained by mechanism as forms of motion. There are also various particulars in which nature as a whole is of the type of an organism, not of a machine: such as the subordination of all the parts to the idea of the whole, the teleological character of the action in the progressive realization of an ideal, and the fact of the appearance of new and higher powers analogous to vital growth. It is surprising that in the face of insurmountable difficulties and at the expense of resorting to subordinate hypotheses more complicated and inconceivable than that of the cycles and epicycles of the Ptolemaic astronomy, scientists adhere so pertinaciously to the one-sided explanation of the universe as solely a mechanism. Nothing but an arbitrary and extravagant speculative demand for unity and simplicity seems to account for it. After more than two hundred years of more or less persistent and always unsatisfactory efforts to explain nature mechanically, scientists may properly begin to suspect that something more is involved in it than matter and motion.

The process of evolution, while not excluding mechanism, necessarily transcends it, and is more satisfactorily conceived according to the type

of organic growth. But even as thus conceived it cannot of itself account for either the origin or the evolution of the universe without recognizing powers beyond and above it. A seed does not germinate of itself according to the laws of its own being; but only as powers independent of itself supply the favorable conditions, provide it with nourishment and co-operate with it in its growth. Agents act on it and new matter is added to it from without itself. Elemental, chemical and other forces combine with the vital force of the seed to effect the result. All cosmic agencies combine to build up the growing organism. An acorn thus acted on and supplied with food does not transcend the law of causation when it produces an oak and thence many generations of oaks. But if the primordial homogeneous matter of the whole universe is itself the germ, and if it grows into a Cosmos containing elemental substances, diversified energies, matter and mind, which were not in the primordial matter, where is the universe around it which provides its pabulum and exerts the cosmic agencies outside of the homogeneous matter which quicken and sustain its growth? It is plainly the supposition of an effect without a cause. It is the scientifically impossible result of mind evolved from matter, diverse elemental substances evolved from one simple elemental substance, diverse properties and powers brought into being which had no existence in the primordial matter. It implies, as I have already shown, an absolute beginning of a process for which no cause exists, and continuous growth which nothing feeds or sustains.

Scientific speculations and investigations seem equally to demonstrate that no agents yet known within nature, whether mechanical or organic, are adequate to account for its evolution and its existence in its present form. We are driven to the conclusion that to explain the evolution of nature we must recognize the action of a power above and beyond nature.

III. Scientific evolution as distinguished from the materialistic forms of the theory is entirely consistent with the personality of man and the existence of a personal God. ✓

1. It does not involve materialism. A theory of evolution which is legitimate in empirical science simply enunciates an observed invariable sequence; it simply declares how nature goes on. Any one of the theories subordinate to it may be proved true while the others remain unsubstantiated by observed facts. The nebular hypothesis and the persistence of force may be established while not an instance of spontaneous generation has been observed. Darwinian evolution of species may be established while the question of the origin of life remains unanswered; or it may be established as to inferior species and not as to man; or if the development of an anthropoid animal is ascertained, the personality of man still remains a fact which evolution cannot account for, and the

existence of God remains a truth beyond the range of empirical science. We wait for discoveries in respect to evolution without solicitude and with the same interest with which we await discoveries in astronomy and chemistry. It is not evolution which demands materialism, but it is they who were already materialists who thrust their materialism upon it, just as they do on any other law of nature.

Evolution, as taught by Prof. Hæckel and some others, is materialistic. But materialism is a speculation in the sphere of metaphysical and theological thought; it can have no place in the inductions of empirical science. Prof. Huxley admits that the spiritualistic and the materialistic theories of sensation and of mental phenomena are equally conceivable, but he chooses the materialistic as his working hypothesis, because, as he alleges, it is the more simple.* Mr. Spencer admits the reality of fundamental data of consciousness, of constitutional principles regulating all thinking, and of the unknowable Absolute; yet he also adopts the materialistic conception as his working hypothesis. It is not strange, therefore, that evolution is often regarded as essentially materialistic, and that some theologians have felt that the disproof of it is the only defence of Theism and of belief in the existence of spirit.

If, however, evolution essentially involves materialism, that would not prove materialism but would disprove evolution. In the article just quoted Mr. Huxley truly says that "we know more of mind than we do of body; the immaterial world is a firmer reality than the material." Our knowledge of mind, he says is "immediate;" that of body is "mediate," "a belief as contra-distinguished from an intuition." In any conflict, if either is broken down, it must be the latter not the former.

If, then, evolution is to stand as a scientific law of nature, it must stand on scientific observation and induction, independent of the metaphysical and theological speculations of materialism. It is thus held by many scientists. As a law of nature it is simply the largest generalization respecting the uniform order or sequence of physical phenomena.

2. Scientific evolution is not inconsistent with the personality of man. There is no ground for person or spirit in any physical process. Such a being cannot be an effect of a physical evolution. Personality is above nature. Its existence cannot be incompatible with evolution which goes on below it in a different and inferior sphere.

That man is a personal being is known as a fact in consciousness and disclosed in all human history and literature. The question is, "What is man?" not, "How did he become so?" The former question is independent of the latter. If man is in fact a personal being, his origin

* Sensation and Sensiferous Organs; Nineteenth Century, 1879.

must be consistent with the fact. Since in fact he is a person, how he came to be so must be consistent with the fact that he is so. Whatever the process by which he became a person, it does not annul the fact that he is a person. It has already been shown that rational intelligence, feeling and determination cannot be identified with motion nor transformed into it, and cannot be accounted for by matter and force. The mere lengthening of the period through which the transformations of physical force and the changes of matter go on, brings us no nearer to this identification and transformation. The primordial matter is matter still, though in nebulous form; and the science which describes its evolutions can never transcend the limits of physical science. The facts of personality must be attributed to some other cause than matter and force. According to Wallace, by natural selection inferior animal forms could have produced apes, and afterwards a being having almost all the physical characters of man as he is now; but natural selection *by itself* is incapable of producing, from an anthropoid animal, a man such as we find in the most savage tribes known to us. He adds that near the beginning of the tertiary period an *unknown cause* began to accelerate the development of intelligence in this anthropoid being. The conclusion seems forced on us that to whatever extent the human organization may have been the result of evolution, no molecular action of brain and nerve can account for intelligence, and that the facts of personality cannot have resulted merely from the evolution of matter and force, but must be attributed to some spiritual cause.

3. Scientific evolution is not inconsistent with moral law and a moral system. Law in the domain of spirit is not the invariable and necessary sequence which is called the law of nature; it is the truth of reason known to a rational free-agent as law, which in the exercise of free-will he is under obligation to obey. If rational free-agents exist, the moral law exists transcending the laws of nature, and between moral law and the laws of nature there can be no conflict. When it is objected that free-will is impossible because it implies exemption from law, the objector already denies that there is any law in the universe other than the invariable sequences of nature; his objection is thus merely the assumption that materialism is true.

Man is implicated in nature through his body. His physical organization is subject to natural law. As a personal being he knows himself subject to the law of reason. There is no incompatibility between the two; nor does evolution disclose any incompatibility. The law under which the germ was evolved into a completely articulated body no more conflicts with the mature man's subjection to the moral law, than do the laws of gravitation, cohesion, chemical affinity, heat or electricity, to which the germ in its evolution was equally subjected.

And if the human species as to its physical characteristics was evolved from lower species, that no more conflicts with man's freedom and moral obligation under rational law than the development of the individual germ into an individual human body. Defenders of free-will themselves, knowing that the action of will must be under law, have sought for its law in the invariable sequences of nature instead of in the law of reason to free-will which is moral law, and thus have unwittingly surrendered the whole ground to the materialist.

4. Scientific evolution is consistent with Theism. However far evolution may extend our knowledge into the past it cannot reach or explain the origin and ground of things. That question remains as before unanswered by physical science. And evolution gives no new reason for affirming that matter is eternal and that in it alone are the origin and ground of all things. That affirmation transcends evolution and all physical science as really as theism does. We come here to a limit of physical science forever fixed and impassable.

The theory of evolution simply declares the process by which the universe has advanced from a nebulous condition (whether primordial or derived) to its present condition. The assumption that evolution accounts for everything and excludes God from the universe is founded on the error that so soon as we learn by what process anything is made we have no longer any need of believing that it had a maker. Just this common assumption led to the saying of Comte, "that the heavens no longer declare the glory of God, but only the glory of Hipparchus, Kepler, Newton and the rest who have found out the laws of their sequence." It is as if one should say, "He must have been a great sculptor who made this bronze statue." Another replies, "No sculptor ever touched it; I saw it made myself; a formless, molten mass flowed from a furnace, disappeared in the sand, and presently came out this statue. There was a tendency in the molten mass to vary indefinitely; and something in its environment in the sand which helped all variations in the direction of the statue and checked all others. The result is this statue. It was evolved; it had no maker."*

Evolution, therefore, does not exclude God nor involve materialism. As Mr. James Sully says, "To provide a substantial support for the thread of phenomenal events, it would seem as if we must fall back on some ultimate philosophic assumption respecting the efficient principle in the process." And evolution presents no reason for assuming that principle to be eternal matter. Some principle other than matter and force must be assumed to account for the universe and its evolution. Materialism can never be established by any discoveries of physical science.

* See *Personality*: Blackwood & Sons, 1879; p. 107.

Evolution, also, has no explanation of the facts of personality and here again leaves the demand for theism as it was. Prof. Fiske, speaking of the facts of consciousness, says: "The assertion of the evolutionist is purely historical in its import and includes no hypothesis whatever as to the ultimate origin of consciousness; least of all is it intended to imply that consciousness was evolved from matter. It is not only inconceivable how mind should have been produced from matter, but it is inconceivable that it should have been produced from matter; unless matter possessed already the attribute of mind in embryo—an alternative which it is difficult to invest with any real meaning. . . . The problem is altogether too abstruse to be solved with our present resources. . . . The only point on which we can be clear is that no mere collocation of material atoms could ever have evolved the phenomena of consciousness."*

There is, then, nothing in evolution which conflicts with Theism. To find a cause for the events and for their serial order and a substantial support for the phenomena, thought must fall back on some ultimate power or being as the ground or source and the continuous support of the process. It cannot be matter and force, for these are inadequate. It may be Energizing Reason, for energizing reason, evermore and progressively realizing its ideals in the forms and under the limitations of space and time, is adequate to be the ultimate principle or cause of the universe and of all its physical processes. Prof. Lotze regards the world-process as a gradual unfolding of a creative spiritual principle, and both he and Ulrici recognize in the evolution both a mechanical and a teleological process, implying both an energizing and a directing agency. And both processes are recognized in the Energizing Reason.

Mr. Spencer, on the contrary, thinks that evolution is irreconcilable with the idea of pre-existing mind.† And yet in some of his positions he is himself in close affinity with theistic thought. He teaches that the existence of "the Absolute is a necessary datum of consciousness," and that "the belief which this datum constitutes has a higher warrant than any other whatever;" that according to the laws of thought it is impossible to rid ourselves of it; that it is essential in every thought, "being the obverse of our self-consciousness;" that the Absolute is a "Power by which we are acted upon" of which "every phenomenon" is "a manifestation;" that it is "omnipresent," and "wholly incomprehensible." An enthusiastic, but not very discriminating admirer records his conviction that "Herbert Spencer has made an atheistic philosophy impossible." It is true that Spencer here departs from his doctrine of the relativity of knowledge and takes sides with the theologian in re-

* J. Fiske; *Darwinism and other Essays*; pp. 67, 68.

† Reply to Martineau, *Contemporary Rev.* Vol. XX.

cognizing primitive and constitutional data of consciousness, and knowledge of the existence of absolute omnipresent power acting on us and manifesting itself in all phenomena. The theologian goes only a step further in affirming that since the Absolute Power acts on us and manifests itself in all phenomena, we know what it is, at least to this extent, that it must be a cause endowed with powers adequate to account for all phenomena both of matter and mind; that therefore it can only be Reason Energizing. With this also Mr. Spencer agrees so far as to recognize the Unknowable as accounting for the phenomena both of matter and mind; but after thus recognizing it and even partially defining it accordantly, he falls into contradiction in saying that it is unknowable. And sometimes he seems to think of it as the one substance of Spinoza, as when he says that the phenomena of mind and matter are "modes of the Unknowable."

But Energizing Reason fully accounts for the phenomena, since it is at once the Reason that orders and directs and the Efficiency that energizes. The universe is thus accounted for dynamically as the effect of a sufficient cause. It is the effect of the energizing of the Absolute Reason progressively realizing its own eternal and archetypal truths, laws, ideals and ends in a system of dependent beings, personal and impersonal, under the limits of space, time and quantity.

It should be added that Spencer's Unknowable involves every difficulty which is so loudly charged on the theistic doctrine of creation. If the evolution of the unknowable absolute had a beginning, why did the Absolute rest inactive from eternity, and at a certain time wake up as it were and begin the evolution? Did it create the homogeneous matter out of nothing, or emanate it from itself, or find it as it had lain motionless from all eternity, and start it into action? If the evolution had no beginning but has gone on from eternity as now, then the homogeneous, which is the foundation of the evolution, drops out, the universe has always been in a condition of heterogeneity resulting from some previous action of force, and we lose our supposed evolution from the homogeneous. Theism, without defining how long the universe has existed, affirms that so long as it has existed, it has always depended on God for its existence, its arrangement and its action. This meets all that is philosophically essential in the idea of creation.

It must also be considered that while Spencer takes sides here with theism as to its theory of knowledge in affirming that we have knowledge of Absolute Being, while thus he encounters all the difficulties of theism, and yet finds his Unknowable inadequate to account for the universe and its evolution, he is at the same time inconsistent with his own theory of knowledge in the recognition of the Absolute. He

cannot consistently hold that all knowledge is relative and at the same time affirm knowledge of the existence of unconditioned, absolute, omnipresent power; he cannot affirm that we know only the finite and at the same time affirm that we know the existence of a power that transcends the finite. If all knowledge is relative, the knowledge that the Absolute exists even as unknowable, is impossible. The thought of light could never originate in the mind of a man born blind. A brute can never know its own irrationality. The very assertion of the knowledge of the Absolute as existing although incomprehensible is the assertion that knowledge is not wholly relative and is not limited to finite things; for it asserts knowledge of the absolute as distinguished from the finite. In his biology, psychology and ethics, Spencer's theory of the Absolute is not practically operative, but he writes as if man's knowledge was limited to the phenomenal and the finite. In his doctrine of the Unknowable he accepts for the moment the theistic theory of knowledge.

The following thoughts of Spencer the theist heartily endorses: "He who contemplates the universe from the religious point of view, must learn to see that this which we call science is one constituent of the great whole; and as such ought to be regarded with a sentiment like that which the remainder excites. While he who contemplates the universe from the scientific point of view, must learn to see that this which we call religion is similarly a constituent of the great whole; and being such must be treated as a subject of science with no more prejudice than any other reality. It behooves each party to try to understand the other, with the conviction that the other has something worthy to be understood; and with the conviction that when mutually recognized this something will be the basis of a complete reconciliation."*

IV. Scientific evolution affords to materialism no relief from its difficulties and contradictions, and is itself discredited if identified with materialism or used as a vehicle for its dogmas.

1. Scientific evolution, which if true, is only a factual law of empirical science, cannot be identified with materialism, which is a dogmatic metaphysical assertion as to what is the nature of absolute and eternal being.

Materialism rests on its own basis as a metaphysical theory of the universe. It is a theory incompetent to account for the universe and full of contradictions. When evolution is made the vehicle for its propagation, the incompetency and contradictions of materialism are imputed to evolution and break it down. The reason why evolution

* First Principles, p. 21, § 6.

has been so strenuously opposed is that it has been dogmatically and loudly proclaimed as essentially and necessarily a doctrine of materialism.

Physical science cannot account for the facts of the physical universe itself nor for the facts of personality. Evolution, when identified with materialism, is made responsible for accounting for both, and it fails.

2. Evolution removes no contradictions and difficulties of materialism in accounting for the physical universe and its facts, but sometimes proves them irremovable.

The law of the persistence of force fails to account for all the known manifestations of force. Neither the mechanical nor the organic conception of the material universe accounts for its existence and the facts observed in it. Whether it is mechanism or organism it reveals a power outside of itself. Evolution does not relieve the materialist from this difficulty, but at every step reveals it anew.

Evolution precludes the materialistic conception that the world had no beginning. When the materialist says that matter is eternal, it seems easy enough to believe and impossible to disprove it. But so soon as we come to unfold it into its real significance its impossibility is apparent. And this is precisely what evolution demonstrates. At first the evolutionist tells us of original, primordial matter, and reasons as if this nebulous stuff were really the ultimate ground of all things and no question could arise from whence it came or how it came to be constituted and arranged as it was. But this childlike faith cannot continue.

Mr. Spencer tells us that "Matter, Motion and Force, as cognizable by human intelligence, can neither come into existence nor cease to exist."* But if motion is eternal, then the homogeneous never existed; for with the first motion it ceases to be homogeneous and equilibrated. If the theory of evolution is true, motion is not eternal.

If now the materialist says that the homogeneous is eternal, then it must have existed eternally without motion; and at some time there was a beginning of the motion. The motion could not have been caused from within the homogeneous stuff, for that is in complete equilibrium; in it all the matter and force of the universe are motionless in equilibrium; and the entire universe being thus equilibrated cannot start itself into motion. Mr. Spencer says it is an unstable equilibrium; but these words have no pertinence to an equilibrium of the entire universe. Once in equilibrium, it must remain motionless forever, unless the motion in which the evolution begins is either

* First Principles, p. 358, § 109.

without a cause, which is absurd, or else is caused by some power outside of the universe.

And every theory of evolution must assume some particular arrangement of matter and force at the beginning, containing the possibility of what is to be evolved and excluding the possibility of every different evolution. Thus not merely the primordial stuff, but its primitive constitution and laws are antecedent to the evolution and cannot be accounted for by it. The evolution cannot go beyond itself and behind that primordial arrangement to determine or cause them, and so to cause its own beginning and its own determinate course. Any cosmogony which proposes to account for the existence and constitution of the universe as a whole by the uniform sequences or laws of the interaction of its parts is absurd. The assertion that evolution proves materialism is just this absurdity.

The fact of a beginning is also demonstrated by evolution in another way; it gives scientific proof of the fact. Under the action of physical causes according to their known laws, the evolution must come to an end in complete and stable equilibrium, and all life, and all motion, molar and molecular, must cease. But if the evolution, according to its own laws, must come to an end, then it must have had a beginning.

If it is objected that the assumed homogeneous in which the present evolution began was itself the equilibrated matter in which a previous evolution had ended, and that thus a rhythmic alternation of differentiation and integration may go on without beginning or end, the answer is that the equilibrium in which a process of evolution issues cannot be unstable, but must be a fixed and stable equilibrium in which every force in the universe is held still by an equal force and all matter is motionless, and there is no power within the equilibrated universe to renew motion in any of its parts. If now we suppose a force incident on it, it must be a force from outside of the material universe, and therefore hypermaterial.

Evolution at every step in its progress equally demonstrates in nature a power above and beyond nature. This I shall show in another section.

Therefore, if the theory of evolution is true, it demonstrates that the materialistic assumption of the eternal and independent existence of matter is false.

And reason finds no support for materialism in the immense periods of time recognized in evolution. Evolution gives us a time-world evolving in a continuity of successive causal action and interaction, as gravitation gives us a space-world in coexistent unity of causal action and interaction through space. Materialism must find in matter and

force not merely the power which accounts for and explains the beginning of the evolution, but that which continuously sustains and directs it in every moment of time and in the interaction of bodies co-existent in space. Whether we think of a rhythmic alternation of differentiation and integration each lasting trillions of years, or of rhythmic vibrations of an ether, trillions of which beat on the eye in a second of time, or of a single antecedence and sequence of cause and effect, whether we think of interaction between bodies in space through millions of miles or through the immeasurably little distance of cohering atoms, we find an action which matter and motor-force alone cannot explain and which reveals the presence of a power transcending these. Evolution does not help the materialist out of his difficulty here. On the contrary, evolution, as being not merely the development of powers previously existing in the primordial matter but a progress or growth in which new powers come into action, at every grade attained in the ascent reveals the presence of a hyper-material power. The long periods of the evolution might dull the belief of the existence of God in a deist who regards the deity only as the maker of a machine which he sets to running without his intervention. Even here, however, the objection would be addressed to the imagination rather than to the reasoning power; a First Cause removed to so immense a distance in time, would make little impression; like a fixed star so far off that it has no parallax. And it is doubtless the very length of this period of evolution which gives it an atheistic influence on the popular mind, as if it crowded God off beyond the confines of the universe. But this affects the imagination only; there is nothing in it to convince the understanding. And this influence acts only against the mechanical conception of the deist. It has no force against rational theism which finds God immanent in nature; and none against Christian Theism which reveals God as "Him in whom we live and move and have our being."

3. Evolution gives no aid to materialism in resolving mind into a function of matter and all mental acts into products of matter and motor-force.

It is indeed used as an argument for this conclusion and as such is widely regarded as unanswerable. But it is important to remember that the question is as to what we are, not as to how we came to be so. The question what an Egyptian pyramid is, is independent of the question how it was built. Any theory how it was built must give way, if it involves the denial that the pyramid is what we know it to be. Of the same purport is Chauncey Wright's remark in a review of Spencer, that the critical question is not how we come to believe, but why we believe. In a previous chapter it has been demonstrated

that we know ourselves as personal beings, and that if this is not real knowledge no knowledge is possible. If the doctrine that mind is a function of matter, that the Ego is but a series of sensations, is an essential element in the theory of evolution, then it is the theory itself which is proved false, not the personal Ego that is proved non-existent. The theory that mind is a function of matter would also involve a radical change in the accepted definition of matter.

But in fact evolution leads to the contrary conclusion. The law of the persistence of force is essential to evolution. But it has been found impossible to reduce the facts of mind under that law. The mind-process and the motor-process go on parallel but independent. As Prof. Clifford says, the mind-series "goes along by itself." The human mind will not rest content with a series of phenomena referable to no agent or cause. We shall not be likely to attempt to think of the unity of the two by the pre-established harmony of Leibnitz. Dogmatic materialists quietly assume against all evidence that the mind-series is dependent on the motor-series and coolly reason as if this were an established fact, or else ignore it as not an object of scientific thought. But evidently the only legitimate scientific procedure is to recognize the mind-series as the manifestation of a hypermaterial agent or cause; and especially in view of the fact that in self-consciousness a man has knowledge of himself as one identical individual endowed with reason, rational sensibility and free-will.

4. Scientific evolution affords to materialism no basis on which to teach good morals.

First, there would be no data for constructing a theory of ethics. Ethical ideas in their distinctive sense would have no legitimate place. The idea of right and wrong does not arise in the sphere of the material. Even when we speak of the right or wrong action of mechanical or organic forces, the words mean merely its conformity or nonconformity with a truth of reason which as regulative or directive of the action is a law to it. To materialism the distinction of right and wrong has no meaning. Evolution, going on solely in the sphere of the material, cannot originate the distinction nor give it any significance. As a law of nature it is entirely compatible with the distinction when once it has originated in the reason; but, because it is merely a law of nature, it can give no aid to materialism in its unavailing struggles to construct from materialistic data an idea of moral law or of right and wrong which will meet and satisfy the moral consciousness of mankind.

And on the materialistic supposition there would be no moral agents capable of knowing and obeying moral law. Men would not be rational free-agents, but merely material organisms in which physical

force acts under cosmic action mechanically and necessarily. A man then would be no more responsible for his actions, no more virtuous or vicious than a river which "windeth at its own sweet will." And there would be no place for the law of love; for this has meaning only as rational beings know themselves related to each other under the law of universal reason and thus united in a rational and moral system. In the sphere of matter and force the stronger necessarily prevails over the weaker; in the sphere of reason and personality the law requires the stronger to protect and help the weaker.

In the absence of moral ideas, moral law and moral agents, nothing remains to regulate the conduct of life but the desire of enjoyment. Reflective thought can rise from this desire to a knowledge of the expedient; and this is the highest attainment possible. For the regulation of conduct there is no longer a rational and moral law declaring what ought to be done. There is only an invariable sequence or law of nature; which is that every man necessarily follows his nature and seeks whatever he thinks will most promote his own enjoyment.

2. Secondly, if now we cast about for some general principle or law determining how a man shall seek his own interest, evolution brings in a law which is positively immoral. It must bring in such a law and cannot bring in any other. The law of the survival of the fittest is only a specific instance of the law of all material force, that the stronger must prevail over the weaker. This becomes the universal law according to which all action in the universe necessarily goes on. That the stronger always overpowers and crowds out the weaker is the law of minerals, and plants, and brutes, and men. The idea of right is lost in the idea of might. If now one attempts to find any principle for a moral law regulating the whole universe it could be only the principle which is subversive of all morality, that "Might makes right." And so Prof. Haeckel represents it: "None but the idealist scholar who closes his eyes to the real truth, or the priest who tries to keep his spiritual flock in ecclesiastical leading-strings, can any longer tell the tale of 'the moral ordering of the world.' . . . The terrible and ceaseless struggle for existence gives the real impulse to the blind course of the world. A 'moral ordering' and a 'purposive plan' of the world can only be visible, if the presence of an immoral rule of the strongest and undesigned organization is ignored."* The theory, if made a basis of ethics, would seem to justify the Spartans in destroying feeble infants, which Prof. Haeckel, though not justifying it, compares to a gardener's pulling the weeds from among the cultivated plants.†

* *Evolution of Man*: Appleton's Translation. Vol. I., pp. 111, 112.

† *History of Creation*: Translation. Vol. I., pp. 172, 173.

The same would justify savages in killing their old people. Mr. Darwin, though certainly not intending to justify it as a universal rule, speaks of it as evincing "sound sense." "Unconscious selection in the strictest sense of the word, *i. e.*, the saving of the more useful animals and the neglect or slaughter of the less useful without any thought of the future, must have gone on occasionally from the remotest periods and among the most barbarous nations. . . . When the Fuegians are hard pressed by want, they kill their old women for food rather than their dogs; for, as we were assured, 'old women no use—dogs catch otters.' The same *sound sense* would surely lead them to preserve their most useful dogs when still harder pressed by famine. Mr. Oldfield, who has seen so much of the Aborigines of Australia, informs me that they are all very glad to get an English Kangaroo-dog, and several instances have been known of the father killing his own infant that the mother might suckle the much-prized puppy."* I suppose Mr. Darwin would call this also "sound sense;" and according to materialistic evolution it would be. It would not be justifiable or right any more than a stone's falling to the ground is justifiable or right, for the idea of right would be wanting and the word would have no meaning; but it would be acting according to the law of nature, the only law supposed to exist. Accordingly a professor lecturing recently before the Academy of Useful Arts on "Evolution in the Arts," said, according to the report of the newspapers: "It is contrary to the law of nature to have any sympathy for paupers, crippled folk, or Indians." Prof. Bowne cites Hellwald, an enthusiastic German evolutionist, as insisting on the struggle for existence and the right of the stronger as the only basis of morals; and as claiming that the word morality should be banished as void of meaning from scientific writings. He describes all philanthropic efforts to raise men to ideal humanity as humanity-hypocrisy (*Humanitäts-heuchelei*.)† And Mr. Roebuck has said: "The first business of a colonist is to clear the country of wild beasts, and the most noxious of all the wild beasts is the wild man."

3 Thirdly, materialistic evolution gives no basis for the just rights of the individual in relation to the State; but if logically consistent must declare it to be an invariable law of nature that the State as the stronger hold the individual as the weaker in subjection to its own arbitrary and despotic power.

Mr. Spencer says: "The life of the social organism must, as an end, rank above the lives of its units." This accords with the "*dulce et decorum est pro patria mori*" of all ethics. But Mr. Spencer teaches

* Variations under Domestication: Vol. II., Chap. xx., p. 260. Am. Ed.

† Culturgeschichte in ihrer natürlichen Entwicklung: Studies in Theism, p. 423.

that the interest of the State and that of its individual units conflict and can be brought into harmony only in the remote future by natural evolution.* As civilization slowly approaches this harmony the subordination, loyalty and allegiance of the individual to the State is proportionately lessened. Ludwig Noiré regards the State as an organism which controls, appropriates and uses the individual for its own advantage. "This consideration," he says, "clears away much hollow philanthropy, which applies the standard of individual morality to the State, not considering that the State is a great organism of a peculiar kind which is subject to far other laws than the individual. Hence the State may demand of the individual to sacrifice his life and all the highest ends of his life to the State."† Mr. Darwin, in answering the objection that the sexless working bee could never have been evolved under the law of the survival of the fittest, maintains that the swarm must be considered as the unit; the swarm which has the most working bees would have the advantage in the struggle for life. Noiré, Spencer and other evolutionists conceive of a State as a unit in the same way. Society is treated as itself actually and literally an organism of which individuals are the component parts, and trades, guilds and other subordinate unities are organs. The individual is lost in the organization and exists only for it. The conclusion would be that the more complete the despotism of the State over the individual, the more prosperous it will be. Here comes in a sort of law of altruistic self-sacrifice; but it is compulsory and not of love; as a lamb exercises self-sacrifice when devoured by a wolf.

Christianity teaches that we are members one of another, and are one body in Christ. But it is the common membership of free-agents in a rational and moral system; and on this fact the law of love is founded. Christianity in the very act of declaring the community of men in their common relations to God in Christ has emphasized the worth of the individual and the sacredness of his rights, and thus has laid the foundation of political and personal liberty, of the dignity of labor, and of the distinctive ideas of modern progress. Its command is, "Honor all men." It has established the principle that government itself is subject to God's law of love, is bound to enact and enforce just laws and to protect the rights of the citizens, and exists for the good of the governed (Rom. xiii. 1-7). It recognizes the individual person and the organized society as the two poles through which, according to the Christian law, love must pass in order to complete its circuit and bring the rights of the individual and the authority of the State into har-

* Data of Ethics, pp. 133, 134. Chap. viii.

† Die Welt als Entwicklung des Geistes; S. 112.

mony. And this harmony, however imperfectly realized, is required from the beginning and through all the conflicts of progressive civilization as the unchanging and universal law of God.

Materialistic evolution breaks down in attempting to complete the circuit; it knows no rights either of the individual or of the State and leaves their interests in conflict until some future period not affecting the interests of the states and persons now existing, and therefore, according to the materialistic theory, of no practical concern to them. Materialistic evolution sweeps away the Christian conception founded on the law of love, and carries us back to the old heathenish conception that the State owes no duties to the citizen and the citizen has no rights as related to the State. This is the same theory of the State which Comte reached from the starting-point of complete Positivism.

Mr. Spencer finds a conflict between Egoism and Altruism. He recognizes the existence of altruistic instincts both in man and the brutes. He also teaches that altruistic action secures a return of sympathy and help, and thus conduces to the advantage and consequently to the "survival" of the individual. With great clearness and force he demonstrates the reciprocal necessity of egoism and altruism to the well-being both of the individual and of the species, and points out the evils necessarily resulting from the action of either alone. He also indicates a progress of altruistic enjoyment by the survival of the fittest till a man will find as much pleasure in serving and as much pain in injuring another as in being served or being injured himself; and so will come a millenium of universal love.

But altruism and egoism present themselves to him, nevertheless, as contradictory principles, and he discusses at length their possible "conciliation."* The difficulty is a serious one to him as an evolutionist, because it implies two contradictory laws of nature, each fundamental in the very constitution of the universe, the law of egoism that it is essential to the survival of the fittest that the strong crowd out or crush the weak, and the law of altruism that it is essential to the survival of the fittest that the strong protect and help the weak. It is an ethical contradiction in the very essence of evolution since, according to its laws, that which increases the happiness of the stronger destroys the happiness of the weaker. Christianity finds no such contradiction. It recognizes the love of self and the love of others as factors in universal love; it commands to love God with all the heart and our neighbor *as ourselves*. Christ presents the law of love not as a necessary and uniform sequence of nature, but as a law of supreme reason declaring the duty of rational free-agents in a rational and moral system. The par-

* Data of Ethics: Chaps. xi.-xiv.

ticular service which in the exercise of his powers a man must render from time to time to God, to particular individuals and communities of men, and to himself, he must determine according to his best judgment in view of their reciprocal relations in the system as well as of the circumstances of each case. Substitute the Christian law of love for the materialistic theory and all antagonism disappears. Egoism and altruism are not the names of wrong and right character. The Christian law of love requires a man to love himself equally with his neighbor as on a level in their common relation to God and having equal rights in the rational system of which God, the common Father of all, is the head. All that part of "conduct" in which a man provides for himself and his own family may be as really a manifestation of universal love as the conduct of a martyr dying in fidelity to principle or of a wealthy man distributing his thousands to endow colleges or to spread Christian civilization. Christianity recognizes, not less than Mr. Spencer, that a person must exist before he can act and must develop his own powers and resources in order to the more effective service of others and of society as a whole. It admits that, in this sense, egoism is necessary to promote the interests of the community, and altruism or the service of others is necessary to promote the welfare of the individual rendering the altruistic service. As already observed, Christianity has taught the worth of the individual, the sacredness of his rights, the equality and fraternity of men in their relations to God, their common father, and has made these ideas powers in modern civilization. It has also taught the altruistic and self-sacrificing aspect of Christian love. It has taught it in the whole life and work of Christ and has made it a power in civilization wherever, in any approximation to its essential character, Christianity has prevailed. It has made Egoism and Altruism coefficients in human progress. It has taught men self-respect and self-reliance and aspiration to realize their highest ideal of human perfection even in the humblest sphere and surroundings; and has taught them to live for humanity in self-consecrating service. It has taught them these as the two aspects of universal love. Evolution leaves the two in contradiction. And so, in the practical application of the theory in morals, some, like Haeckel, teach the law of supreme selfishness as the only ethical teaching of evolution, and so, if consistent, must admit that it annihilates all moral distinctions; others teach a one-sided altruism, implying an almost mystical doctrine of self-annihilation; an element of thought which seems to crop out in the writings of George Eliot.

It may be objected that Mr. Spencer's Ethics ought not to be called materialistic. He believes in the existence of an Unknowable Absolute, which is an omnipresent power, transcending both matter and

mind, but having the properties which account for both. This Unknowable is manifested to us in all that we know. It manifests itself therefore in the phenomena of mind as really as in the totally different phenomena of matter. But Mr. Spencer, for no good reason which I can see, and inconsistently with the requirements of his own agnosticism, arbitrarily and positively excludes the existence of a spiritual system and recognizes only the evolution of a system of mere matter and force. In his *Biology*, his *Psychology*, his *Data of Ethics*, and his *Sociology*, he attempts to explain all facts of life, mind, personality and morality by the evolution of matter and force. In his *Data of Ethics* is no recognition of will, no distinction between the voluntary and the instinctive, no intimation that rationality and voluntariness are essential to moral character and responsibility, no distinction of "conduct" in a man and in an insect, or even in a plant or stone; and in his account of the Will in the *Psychology* he explicitly denies its freedom in any other sense than freedom from external hindrance to do what one desires to do—the freedom which every mouse has when not in a trap; so that moral "conduct" is as truly predicable of a mouse as of a man. Hence he gives us, as he himself says, a "presentation of moral conduct in physical terms;" and speaks of "that redistribution of matter and motion constituting evolution." In the *First Principles* he avows agnosticism. In his other works he makes little use of it except sometimes to attempt in the Unknowable an identification of matter with mind, of motion with thought, which he acknowledges to be impossible in the knowable. He disclaims materialism. His disciples for themselves and in his behalf disclaim materialism with some indignation at the ignorance of those who impute it to them. But why should they think the imputation of materialism unjust when their agnosticism becomes dogmatic; when it affirms that the evolution through which alone the Unknowable is manifested is merely "the redistribution of matter and motion." Materialism can hardly be only "a working hypothesis" when it thus dogmatizes.

Fourthly, materialistic evolution gives no motives practically effective in deterring from what the common conscience of man forbids as wrong or in inciting to what it commands as right; or, as the materialist must say, in deterring from what is hurtful to society and inciting to what is useful. It presents no religious sanction, no moral law, no sense of obligation, no beauty of holiness, no dignity of virtue, no consciousness of freedom and responsibility, no sense of ill-desert. It appeals to no motive other than those which incite the brutes; it recognizes no human virtue different from that of the brutes, and accustoms men to justify their conduct by appealing to the actions of brutes. Mr. Spencer says: "Consider the relation of a healthy mother to a healthy infant. . . .

In yielding its natural food to the child the mother receives gratification; and to the child there comes the satisfaction of appetite. . . . The act is one that is to both exclusively pleasurable, while abstention entails pain on both; and it is consequently of the kind which we here call absolutely right.”* Evidently the action of a cat suckling her kittens is in the same sense and for the same reasons “absolutely right.” Dr. Van Buren Denslow, arguing that the law, “Thou shalt not steal,” is simply a command enforced by the strong for their own good on the weak, says: “Universal society might be pictured, for the illustration of this feature of the moral code, as consisting of two sets of swine, one of which is in the clover and the other out. The swine that are in the clover grunt, ‘Thou shalt not steal; put up the bars.’ The swine that are out of the clover grunt, ‘Did you make the clover? let down the bars.’ ‘Thou shalt not steal’ is a maxim impressed by property holders on non-property holders. . . . No one would say that if a lion lay gorged with his excessive feast amidst the scattered carcass of a deer, and a jaguar or a hyena stealthily bore away a haunch thereof, the act of the hyena was less virtuous than that of the lion. How does the case of two bushmen, between whom the same incident occurs, differ from that of the two quadrupeds? So far as the irresistible promptings of nature may be said to constitute a divine law, there are really two laws. The law to him who will be injured by stealing is, ‘Thou shalt not steal,’ meaning thereby thou shalt not suffer another to steal from you. The law of him who cannot survive without stealing is simply, ‘Thou shalt in stealing avoid being detected.’”†

And the desire of happiness is not a motive adequate to account for all that the world admires as right action nor a criterion by which to distinguish it. In a city smitten recently with yellow fever, when all who could were fleeing, a young salesman in a drug store said that he was entrusted with the sale of drugs for the sick, and he would not leave his post; he remained and died. When General Griffin was in command of the military sub-district of Texas, with head-quarters at Galveston, the yellow fever became epidemic in that city. By the removal of his superior he had already succeeded to the temporary command of the whole district and was ordered to remove to head-quarters at New Orleans. But not a surgeon was left for duty at the post at Galveston; the superior officers were down with the fever; the troops were dying as rapidly as the citizens. General Griffin telegraphed to Washington for permission to stay at Galveston as his post of duty in that time of distress. He stayed and died. A person

* Data of Ethics, § 102, pp. 261, 262.

† Denslow's Modern Thinkers, pp. 243, 244, 245.

poisoned his next of kin who was heir to a great estate, was never suspected, became heir to the estate, and lived to old age in wealth and luxury, trusted and respected by all. All men abhor the last as a criminal and honor the two first as heroes. Yet if the desire and attainment of happiness are the essence of virtue, there is no ground for this discrimination. And according to the theory of the absolute virtue of a happy cat and kittens, the happy murderer was virtuous so far as the murder attained for him a life of happiness and abstention from the murder would have prevented it; and the suffering and dying heroes were vicious and depraved because their action issued speedily in the loss of their own lives with all the possible happiness of many years, and therefore gave little help to those who were suffering around them.

Nor does this theory give any motive for deeds which the world admires as heroic virtue. It recognizes no motive but the desire of happiness. How can that impel a man to self-denial, suffering and death either to make other people happy, or to obey a delusive idea of right, empty to him of all significance? On the contrary the inference seems to be logically inevitable that the self-sacrifice for others' welfare, the patriotic offering of life for one's country, the martyrdom in fidelity to principle, which the world has admired as the highest and most heroic virtue, have been mistaken and foolish actions approved in this practical age only by doctrinaires and sentimentalists; that even the sufferings and death of Jesus to save mankind from sin were the manifestation only of an inconsiderate enthusiasm. And opinions looking towards, if not explicitly avowing this inference are already promulgated.

It is said that, after ages of evolution, altruistic action will be enjoyed by future men, more than egoistic. But of what concern, on this theory, is the happiness of generations of Altruists, to be evolved ten thousand years hence, to the Egoists who are living now. And how can that remote happiness of unknown persons, with characters strange and incomprehensible to the Egoist, be a motive to induce him to sacrifice his own happiness to contribute some infinitesimal amount to the development of them and their enjoyment? What barrier of motive does this theory set up against any act deemed by the common conscience of man to be a crime, if by it the Egoist thinks he can promote his own interest?

5. Fifthly, the materialistic theory of evolution tends to break down moral law and order and to give free course to the worst passions of men.

If materialistic evolution becomes generally believed, it must undermine morality. The full effect would not be immediate, for the moral and religious education of the present generation would still be influential; but it would be inevitable in the near future. The principles of

human brotherhood and the equal rights of man under the common fatherhood of God, the humane virtues and the spirit of self-sacrificing love and all the influences with which Christianity has quickened modern civilization will pass away in its collapse. Enthusiasm for truth and right and humanity will give place to a cold and clammy expediency. There will be no more place for the high appreciation of rectitude and fidelity to principle above property, and pleasure, and life, which even the heathen have had. Juvenal says:

"Esto bonus miles, tutor bonus, arbiter idem
Integer; ambiguae si quando citabere testis
Incertaeque rei, Phalaris licet imperet ut sis
Falsus, et admoto dictet perjurium tauro,
Summum crede nefas animam praeferre pudori
Et propter vitam vivendi perdere causas." (*Sat. Viii.* 79-84.)

The world admires these sentiments and esteems actions accordant with them as the noblest heroism. But there is no place for them in the materialistic ethics; it must pronounce them foolish rather than noble; for according to that ethics the only "*causa vivendi*" is pleasure, and there is no conceivable reason why a man should sacrifice his pleasure for any idea of truth and right or for the promotion of the pleasure of others.

Nor is it merely refined sentiments of honor and right which will disappear. The sense of moral responsibility will be extinguished; man will claim as his right what he gets by superior force or cunning; success will be the sufficient justification of action and will be more and more worshiped as the supreme standard and ultimate criterion of praise and blame.

It is a serious question how far the prevalence of this materialism is responsible already for a decay of virtue. J. S. Mill said, "The chivalrous spirit has now-a-days almost disappeared from our books of education. For the first time in history the young of both sexes are growing up unromantic." Mr. Sumner's anti-slavery principles are now spoken of as "sentimental politics." "When the second Napoleon, after mounting his uncle's throne by the unscrupulous use of force, rode in triumph into London, a leading English journal derided the morality which protested against paying homage to a success achieved by treachery, perjury and massacre, as a morality of Sunday-schools. And the British ambassador at Constantinople wrote respecting the butchery of the Bulgarians that 'the necessity which exists for England to prevent changes from occurring in Turkey which would be most detrimental to ourselves, is not affected by the question whether it was 10,000 or 20,000 who perished.'" This is the same morality of force which is expressed in

the words of Napoleon, in reply to some remonstrance as to the number of lives which his wars were costing, as reported by Prince Metternich, "What is the destruction of a million lives to a man like me?"

The full realization of the practical issues of this materialistic Hedonism will not be visible in this generation trained in Christian civilization; certainly not in the scientists who proclaim it. These have been highly educated in Christian schools; they have no fear as to the means of subsistence; their honorable position in society is insured; their interest in science lifts them above the greed of gain and the baser sources of enjoyment; and for the most part they are not seeking to destroy the ideas of moral law and right but, retaining them, to find a philosophical basis for them in materialistic evolution. The legitimate results can be realized only in a generation which knows only the new ethics as the guide of conduct, and in its practical application to life by uncultured men struggling for subsistence, greedy of gain and finding their happiness in gratifying the baser desires and appetites of human nature. There is no motive in this hedonism to hold such men back from recklessness of all rights of the family, of property and of life which stand in the way of their own pleasures.

Already we see men less imbued by education with Christian moral sentiment, who have brightness, intelligence and power, applying the principles of the new ethics to the subversion of all moral law, obligation and order, and of all distinction of right and wrong. Dr. Denslow criticises Spencer as unphilosophical in his "dogmatical assumption that there is a moral law philosophically deducible by argument from the facts of nature." He argues correctly that on Mr. Spencer's principles the very idea of moral law disappears. "An ethical system which boils down into an exhortation to all men to promote their own interests has no ethical quality left in it." He attributes Mr. Spencer's attempt to retain these ethical terms and ideas to his having "been so far impressed and molded in his thought by the theological atmosphere of modern Christianity." I have already quoted Dr. Denslow's affirmations that the moral laws protecting property are not moral, but merely class-laws enforced by the superior power of the owners of property. He expresses the same opinion respecting the moral law against unchastity and against falsehood and deceit. And he comes to the conclusion that "all moral rules are in the first instance impressed by the strong, the dominant, the matured and the successful on the weak, the crouching, the infantile and the servile, . . . and are doctrines established by the strong for the government of the weak."* Here we perceive the principles of materialistic ethics already carried out to their legitimate practical con-

* *Modern Thinkers*, pages 240, 242, 245, 247, 249.

sequences, the denial of the reality of moral law and obligation and of the distinction of right and wrong.

The extreme practical application of these principles has made comparatively little progress in this country. On the continent of Europe materialistic evolution is laid hold of as the support of atheistic theories propounded as the basis of the immediate reorganization of society and proposing radical and revolutionary schemes which if carried out can issue only in anarchy. M. Gustave Flourens says: "Our enemy is God. Hatred of God is the beginning of wisdom. If men would make true progress it must be on the basis of atheism." The same is the doctrine of the Nihilists. Michael Bakunin, sometimes called the father of nihilism, in a speech at Geneva in 1868 said: "The old world must be destroyed and replaced by a new one. It is our mission to destroy the *lie*. The beginning of all lies which have ground down this poor old world is God. . . Tear out of your hearts the belief in the existence of God; for as long as an atom of that silly superstition remains in your minds, you will never know what freedom is. . . . The second lie is *Right*. *Might* invented the fiction of Right in order to insure and strengthen her reign. . . . Might forms the sole groundwork of society. . . . And when you have freed your minds from these. . . . then all the remaining chains which bind you, and which are called science, civilization, property, marriage, morality and justice will snap asunder. Let your own happiness be your only law. But in order to get this law recognized and to bring about the proper relations which should exist between the majority and the minority of mankind, you must destroy every thing which now exists in the shape of a State or social organization." And the drift of all materialistic theories is in this direction.

"Il n'est point de vertus, ni de vices;
Sois tigre, si tu peux. Pourvu que tu jouisses,
Vis, n'importe comment pour finir, n'importe où."

Sixthly, whatever ethical theories are adopted, man's conscience and moral intuitions and feelings remain. Ethics legitimately derived from materialistic evolution is incompatible with this fact of man's constitution and cannot account for it. Whatever theories are adopted, the consciousness of responsibility and obligation, and more or less clearly of the law of love, will assert itself. This also materialists themselves admit when they affirm that our moral convictions and impulses are independent of Christianity, of Theism, or of Materialism; and that whether the soul exists after death or not, we are bound to live righteously here and now. This is a real though it may be an unwitting recognition of intuitive morals. To this moral consciousness

of mankind we appeal in judging of the moral tendency of materialism. The question is not whether man has a moral constitution, for that is an incontrovertible fact. The question is, does materialistic evolution explain or account for this fact? Is it even compatible with this fact? If not, it is the materialistic evolution which is proved untrue, not the moral constitution of man which is proved unreal. And then, if materialistic evolution prevails, it carries with it the denial of true morality, and is not merely a question of scientific speculation but is a false speculation which is contrary to good morals. Mr. Spencer explains this intuitive perception of right and wrong by alleging that "the doctrine of innate powers of moral perception becomes congruous with the utilitarian doctrine, when it is seen that preferences and aversions are rendered organic by inheritance of the effects of pleasurable and painful experiences in progenitors."* But this could explain only pain and pleasure, not that essentially different reality, the intuition of moral obligation. And an organic "cohesion" of pain with wrong doing would not result unless during the long succession of savage ancestors every act of robbery and of killing had been attended with an overplus of pain. Whereas in fact savages only exult in such deeds. The chief who killed and ate his rival and made one of his marrow-bones into a trumpet with which to sound his own triumph, was not organizing a coherence of pain with killing and cannibalism.

Mr. Spencer's error is that he makes no distinction between a law or invariable sequence of nature and the moral law. He holds that the law of right conduct is grounded in the nature of things, that is, in the constitution of the universe. In proof he argues that, while in sensitive life from the beginning the strong crowd out the weak that stand in their way, and man from his first appearance till now has been necessarily egoistic, yet in the ages of the future he will more and more learn that his own welfare is promoted by promoting the welfare of society and will come to find his happiness in serving others equally with himself; then human evolution will go on according to the new law that the strong ought to protect and help the weak. But this evolution alike in its egoistic and its altruistic stages is a process of nature going on necessarily in invariable sequence of physical cause and effect. It is no more moral action than the falling of stones or the growth of grass. In the whole discussion Mr. Spencer recognizes no moral law, but simply sets forth a necessary and invariable sequence of nature as a substitute for moral law; consequently in proving that the evolution must issue ages hence in a sort of equilibration

* Data of Ethics, p. 124.

of egoism and altruism, he presents no moral restraint of vice or incitement to virtue capable of exerting the slightest influence on the still egoistic man. And this is the rock on which all materialistic theories of ethics are wrecked, that they can deal only with laws of nature and the happiness found in necessarily following the impulses of nature; and thus cannot attain a moral law nor even the idea of right and wrong.

In one respect, however, the result of Mr. Spencer's investigations is valuable. In a former chapter I showed that man knows by experience and observation that the law of love is supreme. Mr. Spencer demonstrates that the law of love is the ultimate ground of the law of nature and the reign of love its ultimate issue and end. He already knows the unknowable to be Power. Here he demonstrates that it is Love; and therefore God; for God is love.

5. Materialistic evolution not only fails to account for the facts of personality, but is found to issue in the submergence of personality in unconsciousness and of voluntary action in automatic. Mr. Spencer says: "When actions which were once incoherent and voluntary are very frequently repeated, they become coherent and involuntary. Just as any set of psychical changes originally displaying Memory, Reason and Feeling cease to be conscious, rational and emotional, as fast as by repetition they grow closely organized; so do they at the same time pass beyond the range of volition. Memory, Reason, Feeling and Will disappear in proportion as psychical changes become automatic."* Mr. Lewes says: "In instinct there is not intelligence, but what was once intelligence; the specially intelligent character has disappeared in the fixed tendency. The action which formerly was tentative, discriminative, has now become automatic and irresistible." He calls it "lapsed intelligence."† The doctrine of these and other evolutionists is that the infant is born with a fund of experience, registered in the organism and transmitted by heredity, constituting instinctive tendencies and manifested in automatic actions. "When the adjustments of the organism to its environment begin to take in involved and infrequent groups of outer relations . . . then there come to be hesitating automatic actions; then Memory and Reason simultaneously become nascent."‡ But by continued repetition these actions gradually become automatic, and reason, memory, will and feeling lapse into instinct, and their action goes on in unconsciousness. The evolution therefore seems to be the continual transition from conscious intelligence, feeling and will to instinct; from the rational,

* Psychology. Vol. I., § 218, p. 499.

† Problems of Life and Mind. First Series. Vol. I., pp. 120, 130.

‡ Spencer's Psychology. Vol. I., pp. 479, 480, 456.

the free, the personal, the moral to the instinctive, the automatic, the unconscious and the necessary. When "adjustment" becomes complete all conscious rationality, intelligence, free-will and feeling disappear and the highest result of evolution is the relapse of a person conscious of rationality and free-will, of moral and religious character and happiness, into a senseless automaton acting in unconsciousness and necessity.

Accordingly personality and consciousness in any form are merely transitory conditions of human existence. Sooner or later, as the evolution continues from generation to generation, the adjustment of the organism to the environment must become complete. Then all conscious intelligence, feeling and volition will have lapsed into instinct, and thenceforward man is a mere automaton, moved in the courses of nature as necessarily and as unconsciously as the planets in their orbits or the atoms in an explosion of gunpowder.

This result of evolution in the sphere of consciousness is analogous to its predicted result in the sphere of unconscious matter. In the latter the evolution must issue in complete equilibrium, which means the cessation of all motion whether molar or molecular. In the former it must issue in the complete adjustment of organism to environment, which means the cessation of all conscious intelligence, feeling and volition. This appears to be a sort of *reductio ad absurdum*. The evolution of mind by the redistribution of matter and motion reveals itself as impossible by its necessary issue in the complete extinction of mind and of all mental phenomena. Prof. Fiske, in behalf of Mr. Spencer, indignantly disclaims the belief that mental phenomena are correlated with motion and identical with it, so that motion is transformed into thought and thought transformed back into motion; and disclaims the materialism involved in it. But Mr. Spencer, in explaining intelligence, feeling and volition as always lapsing into instinct and disappearing in unconscious registration, really accepts the belief and must logically accept the materialism involved in it. Accordingly he says: "Any hesitation to admit that, between the physical forces and the sensations there exists a correlation like that between the physical forces themselves, must disappear on remembering how the one relation like the other is not qualitative only, but quantitative."* And what he here says of sensation he assumes, in his subsequent works, to be true of all phenomena of mind and personality. But by what metrical scale he measures the quantity of thought, feeling or volition is not apparent.

The facts on which this theory of lapsed intelligence rests are well

* First Principles, § 82, p. 275.

known. By continual repetition a muscular action becomes secondarily automatic; and in proportion as it becomes so, the consciousness of thought and volition is less. For instance, the art of walking is learned slowly and with many falls; but when one who has learned it starts to walk, the walking goes on with scarcely any consciousness of exertion or direction; but when the walker becomes tired this consciousness returns. And the more completely the mechanism of the body is by repetition made to act mechanically, the more exact and unerring is the movement; for mechanism cannot forget, nor mistake, nor hesitate, and within its sphere is more accurate than the conscious action of a man. A person walking in sleep will walk safely where he could not if awake. And one cannot play an instrument well till the fingers seem to move of themselves on the keys.

But these secondarily automatic courses of action are started by the mind and carried on under its general direction; as we see the instantaneous action of thought and will in the instant of a difficulty or interruption. And the secondarily automatic action of the muscles, instead of suppressing intelligence and voluntary action, leaves the mind at leisure for other activities. Walking is favorable for thinking.

In fact instead of intelligence lapsing, this lapse of the action of the organism into the automatic indicates in a striking way the difference between the mechanism of the body and the higher activities of the spirit. When the spirit is in its highest activities of thought, feeling or determination, the body with its movements and conditions lapses from consciousness, but the spirit, instead of being submerged in the organic, seems to be rapt away from it and rises to its utmost intensity of action. This is exemplified in love; as a mother forgets her own weariness and pain in the care of a sick child; and as Paul counted all things but loss for Christ. It is recognized in ethics that the categorical imperative of conscience may be outstripped by love. A being in whom love to God and man is perfect will act from love before he thinks of duty; following inclination he will do right, for his inclination is love. But the love is not unconscious automatic action, but is the intensest energy of the spirit, suffusing it with blessedness. The same is exemplified in intellectual action. Sir Isaac Newton, intent on his great problems, was oblivious of all else, even of his needed food. But this was not a lapse into automatic action, nor into unconsciousness. It was the highest and most intense intellectual action in the concentration of all his energies on his work. That it was accompanied by consciousness is evident because he remembered his work and its results. It was the highest exaltation of spiritual power, holding in subjection and abeyance for the time all bodily appetites and all outward influences.

6. Thus it appears that materialistic evolution is entirely incompatible with the fundamental facts of personality and is thereby demonstrated to be unscientific and false. It also appears that materialism is not an essential element in the theory of evolution. The theory, held simply as declaring a law of nature within the limits of physical science, is consistent with the personality of man and of God, and strengthens rather than destroys the evidence in nature of the directive action of mind.

In Sir Isaac Newton's day the fear that the law of gravitation would lead to atheism was as real as is the fear of the theory of evolution now. Even so late as Newton's time, the celebrated Puritan divine, Dr. John Owen, says of the Copernican astronomy: "The late hypothesis, fixing the sun as the centre of the world, was built on fallible phenomena and advanced by many arbitrary presumptions against evident testimonies of Scripture and reason as probable as any that are produced in its confirmation."* "Mr. Horne, Bishop of Norwich, was always convinced that Sir Isaac Newton and Dr. Clarke had, by introducing speculations of their own, formed a design to undermine and overthrow the theology of the Scriptures and to bring in the Stoical *anima mundi* in the place of the true God; that heathenism was about to arise in the world out of their speculations in natural philosophy. This suspicion took early possession of the bishop's mind and was not changed or shaken through life."† This exemplifies the perverse propensity of men when they know how anything in nature is done, to think that there is no longer any need of a God for the doing of it. The fears respecting gravitation were groundless, and the knowledge of that law enlarged our evidence of the reign of mind in nature. The same will doubtless be true of evolution, if it shall be scientifically established as a law of nature.

V. Scientific evolution at every stage in its progress reveals the presence and energy of a supernatural and hypermaterial power.

1. This is implied in the meaning of evolution as set forth in the teachings of scientists.

If we admit that the physical organization of man is the result of evolution, that admission is consistent with the personality of man. It is not good reasoning that there is nothing in a mature man which was not in the ovum at its impregnation. If the physical organization of man was evolved from an ascidian, and the ascidian itself from inorganic matter, it is not good reasoning that there is nothing in the mature man which was not in the ascidian and in the inorganic matter

* Owen's Works. Vol. XIX., p. 310.

† Horne's Life, quoted in Anna Seward's Letters, Vol. VI., pp. 267, 268; Letter 47.

from which the ascidian was evolved. For if this reasoning is conclusive, wherein does man differ from the ascidian and what significance is there in evolution? What man is, we know by consciousness and observation. If evolution is to account for him, it must account for him as he is and is known to be. We must not strip him of his highest powers and reduce him to the level of inorganic matter in order to accommodate him to the insufficiency of a materialistic evolution. On the contrary, the appearance in man of powers transcending all which nature reveals is entirely accordant with scientific evolution. Evolution as actually held by scientists is not merely a disentanglement and rearrangement of matter and force, but in its essential significance it is, at every successive stage, the revelation, in effects impossible in the stuff before the evolution, of powers higher than ever before manifested.

This revelation of a higher power in the successive stages of evolution, and especially of personal powers at the appearance of man, is incompatible with every materialistic theory of evolution; unless, as Prof. Tyndall intimates in his melancholy meditations on the Matterhorn, we give an entirely new meaning to the word matter; or, as Prof. Fiske more accurately expresses it, use words "which it is difficult to invest with any real meaning." In this case we go back to the idea of evolution as the mere disentanglement of matter and force as it already existed. But the theory of evolution, as true science must present it and actually does present it, requires, in its essential significance, the admission that new powers are revealed in the successive stages of evolution, and that in man, when he appears, powers are revealed which were never manifested in the species of animals from which he was evolved. Evolution is thus compatible with the powers of personality in man; and it is also incompetent to deny that these powers, never manifested in nature until man appeared, are spiritual powers, transcending all that we know as forces of matter. "The idea that the human species at its origin abuts on something both higher and lower, seems almost a necessity of reason—on the matrices of a lower life in its selected forms on the natural side, and on the paternal side on nothing less than the brooding Spirit of God. . . . Every new type of life draws up into itself the next lower one, and something more. . . . And that something more comes from above nature, unless the stream can mount higher than its source, and unless all our talk about the nexus of cause and effect is without meaning."*

The incompetence of evolution to justify the denial of the spiritual or supernatural in man is evident from the contradictions in which the denier is involved. He holds that there is nothing in nature corres-

* Dr. Sears: Fourth Gospel: p. 227.

ponding to the human mind, and yet that man is a product of nature. He knows that mental phenomena cannot be identified with the motion of matter, and yet insists that there is nothing in man but matter and motor-force. He insists that man is one with everything in nature that is inferior to his higher powers, and that there is nothing in nature that is one with man's higher powers; and then disregards those higher human powers as entitled to no scientific recognition. The denial carries contradiction into the very idea of science and into the language in which evolution is described. The very possibility of science consists in the possibility of reducing all physical phenomena to purely mental conceptions. Evolution itself is a mental conception and its progressiveness is conceivable and thinkable only as measured by mental standards. Says Tyndall: "The continued effort of animated nature is to improve its condition and raise itself to a loftier level;" but lower and loftier levels in biology have no meaning in terms of matter and force. Says Spencer: "Life is the continuous adjustment of internal relations to external relations." *Adjustment* is an intellectual act. Scientists habitually speak of potential energy, the recognition of which is at the basis of modern science; but it is an entirely anthropomorphic expression, derived from our own consciousness of power which we do not exert; of exerting energy or refraining from its exertion at will.

2. If mind is to act through matter, it is reasonable to suppose that matter must be specially prepared to be its organ. Not matter in every condition can be the organ of mind, but only matter which has been fitted by special refinement and elaboration. And if so, then it is impossible to say *a priori* through what processes matter must pass in order to be thus fitted, nor how long the process may continue. In the period of a few months a germ is evolved into the body of a human infant capable so long as it lives of being the organ of mind and revealing the powers of personality. If we suppose that, preparatory to the origination of the human species, matter must have been in a process of elaboration and refinement through periods not of months but of ages and through successive higher and higher species of living organisms, in order to fit it to become the germ of a human being and to unfold into an organ through which the powers of personality should be manifested, this origin of the species is no more incompatible with the personality of man than is the development of the individual from a germ in generation. We are told in Genesis that "the Lord God formed man of the dust of the ground." There is no significance in this, except as it recognizes a process by which the inferior material was fitted and formed into an organization capable of manifesting the life of a human spirit. And, far as the thought may have been from

the writer of Genesis, ages may have passed in the process of elaborating the dust of the earth into the body of a man. The fact that it was a process which occupied time however long, and proceeded according to the laws and by means of the energies of an already existing nature, does not make it the less a work of God.

3. If the human species was evolved from inferior species, the manifestation of mind through a material organization would accord with a universal law, that matter already manifesting certain powers must pass through a process of elaboration or development in order to become susceptible of manifesting a higher power.

Uncrystallized matter, when brought into a certain condition, crystallizes. Here is revealed a force of a new and higher order, dominating cohesion and arranging the atoms in a crystalline structure. But there must have been a process preparing the matter before the crystallizing force could reveal itself. A vegetable cannot be nourished by elemental substances. If furnished with oxygen, carbon and all the elemental constituents of its organization, it cannot appropriate them. They must be united in compounds before they can be converted by the plant into its own substance and thus become the medium of manifesting the power of vegetable life. An animal cannot be nourished by inorganic matter, simple or compound. It can live only on organized matter, either vegetable or animal. Matter must be already elaborated to this very high degree before it can be incorporated into an animal organization and become capable of manifesting the force of animal vitality.

The evolution or progress of nature discloses something like this as a universal law. Matter must be elaborated into finer contexture and more complicated adjustments before it can be the medium of revealing the presence and action of power of a higher order, previously unmanifested. Inorganic matter was elaborated in the laboratory of nature for myriads of centuries before any portion of it was brought into a state in which it was possible that the power of organic life could reveal itself in action. And organic matter was elaborated through long periods before it was capable of being the medium through which animal life could appear. And again it was evolving for long periods and appearing in successive and higher forms of animal organization before the higher personal and spiritual power could reveal itself in action through it.

If so, the elaboration is not yet completed, but may go on till higher orders of mind, angels and archangels rising in endless gradations of power and glory, may manifest their presence, and an unseen and spiritual universe come to view, which as yet eye hath not seen, nor ear heard, nor the heart of man conceived.

The existence of the soul after death would still be credible and in fact more easily conceived. Once admit that matter is perpetually passing through a process of evolution making it susceptible of being the medium of manifesting higher and higher powers, and the Scriptural doctrine of existence after death, and of the spiritual body, is accordant with this line of thought. To what extent the evolution may be carried and what higher powers it may become capable of revealing no one can predict. The spiritual body, as described in the Bible, is a conceivable result.

4. Accordingly we find in nature a series of planes or grades one above another, each revealing a power never manifested in a grade below. And if the theory of evolution is true, the appearance of each of these powers constituted an epoch in the evolution.

Mr. Spencer postulates a homogeneous stuff antecedent to the evolution. The "homogeneous" is a metaphysical idea; so also is Mr. Thomson's primitive fluid. Each is an intellectual postulation of being in a mode of existence transcending all human experience and inconceivable by man. The theistic conception of the universe as eternally ideal and archetypal in God the Absolute Reason is scarcely farther removed from matter as we know it; and is conceivable as an object of positive knowledge through our knowledge of personality. The theistic conception, however, does not preclude the postulation of a homogeneous stuff or primitive fluid as the first mode of the existence of matter. The being of physical agents must always, in the order of thought, be antecedent to their action.

In the homogeneous stuff mechanical force is revealed in motion, both in its beginning and its continuance, and whether molar or molecular. It appears as attraction and repulsion, tension and pressure, and as momentum. This is the first epoch in the evolution; in it matter is known, in the lowest grade in which it is perceptible, as manifesting mechanical force, in the motions both of masses and of molecules. In the latter, mechanical force seems to reach its highest form, as in heat, light and electricity.

A higher grade reveals the elemental or chemical forces. The elemental substances by their combinations reveal new and higher powers with more complicated activities and relations. Oxygen and hydrogen each has powers peculiar to itself, but revealed only in combining with other substances; water, which is the result of their combination with each other, reveals new and peculiar powers, unlike those of its component elements.

A grade higher than these is that of living organic matter. And above this is the grade of sentient organisms. Highest of all is the human organization in which is revealed a person conscious of self

persisting in unity and identity and endowed with reason, free-will and susceptibility of rational emotions and motives.

These planes or grades are distinct; superimposed, as it were, with an interval between. And, if evolved, the revelation of the higher power must have been sudden, constituting an epoch. However continuous the process by which matter was elaborated to a capacity of being a medium through which the power could act, the actual appearance of the power must have been sudden. A chemist takes time to prepare a certain solution; but when it is prepared he has only to thrust a substance into it and the crystallization ensues, revealing the causal energy by whatever name it may be called. Whatever may have been the process of elaborating the organic matter and however feeble the first manifestation of sentient life, there must have been a moment when it began.

It is important, also, to notice that the higher power acts immediately on that next below it, and not on the still lower grades. Animal life can raise vegetable organisms up to its own plane, but not inorganic matter. The living power of vegetables can raise up to its own plane inorganic chemical compounds, but not the elements, nor matter of the primitive grade. It is the elemental or chemical force alone that raises the primitive matter into its many compounds. If God made man from the dust in accordance with natural processes, the primitive matter must have been mechanically brought into position in fit proportions, elemental forces must have brought it into the fitting compounds, plants must have organized it into their own living organization, before it was possible to transform it into the muscle, nerve, bone and blood of men.

5. The force manifested in a lower grade does not originate or create the force manifested in the higher, but only elaborates and prepares the matter till it is capable of being a medium for the manifestation of the higher.

This follows from the essential nature of evolution. Evolution as a theory and as, if real, it actually goes on, is analogous, not to a development or disentangling of what already is in the homogeneous matter, but to a growth or progress perpetually evolving something more and something higher. But the less cannot evolve itself into the greater; this evolution necessarily implies a cause not contained in that which is evolved.

There is nothing in homogeneous matter which accounts for the beginning of motion. For so soon as motion begins the homogeneous is already heterogeneous. The same is true, if for Spencer's homogeneous we substitute Thomson's idea of the primitive fluid. As Prof. Maxwell describes it, "the primitive fluid . . . entirely eludes our per-

ceptions when it is not endued with the mode of motion which converts certain portions of it into vortex-rings. . . . The primitive fluid is the only true matter, yet that which we call matter is not the primitive fluid itself, but a mode of motion of that fluid."* Matter, then, lies entirely beyond the range of human perception until it is endued with molecular motion. It is impossible that this homogeneous primitive motionless fluid should itself originate the motion. It is equally impossible that there should have been an antecedent process in the fluid preparing it to be the receptacle of energy and momentum; for a process would destroy its homogeneousness. There must have been, therefore, a beginning of motion caused by some power acting on the primitive homogeneous matter from beyond it. When Mr. Spencer assumes "the ultimate truth that Matter, Motion and Force, as cognizable by human intelligence, can neither come into existence nor cease to exist," he assumes as an ultimate truth a proposition contradicting his assumption of the existence of a primitive "homogeneous."

In fact every interaction either of masses or molecules is a beginning of motion or at least a change of motion, which reveals a power transcending mechanical force. Bodies are supposed never to be in absolute contact; all interaction therefore must imply action at a distance. But mechanical forces and laws cannot explain how the approach of one body can be indicated through space to another so as to call forth an amount of energy exactly proportioned to the mass and distance of the approaching body. For the supposition of force inherent in bodies always and inexhaustibly radiating energy in all directions through space, is contrary to the fundamental law of the persistence of force. And the supposition of potential force becoming kinetic energy implies an exertion of the force and therefore a beginning of the kinetic action.

There must also have been a beginning of the elemental or chemical force. If there are elements they must be of different kinds. But these could not have existed in the primitive homogeneous matter but must have been evolved from it. Or, if they are not elements, and the chemist may some day succeed in discovering that they are themselves compounds and "yield more than one kind of matter," then these simple substances must have been evolved into the elements as known to us. In either case the elemental or chemical force manifested in the elements as we know them, and the wondrous properties and powers which their various combinations reveal, must have had a beginning. And this force could not have been originated by the

* Encyc. Brit. 9th Ed., Vol. III., p. 45.

primitive homogeneous matter itself, but must have come upon it from without, as a hypermaterial force, either acting immediately, or by transformation of mechanical force. Thus evolution necessarily implies that the atoms are, as Herschel and Maxwell have said, "manufactured articles." They exist only as they are moved. They are endued with peculiar elemental powers only as they have been evolved.

There has been, also, a beginning of life. In its lower grades matter is elaborated and prepared to be the receptacle of life and the medium through which it acts; but it is incompetent to originate or cause life. Spencer says: "It may be argued that on the hypothesis of evolution life necessarily comes before organization. . . . Vital activity must have existed while there was yet no structure. That function takes precedence of structure seems also implied in the definition of life."* There is in life a certain directive power. There is no visible distinction between the germs of a zoophyte, an oak, or a man, yet each germ develops always and only its own kind. That directive agency, which orders and guides all the innumerable particles taken up into the organization to the position, character and action which shall subserve the growth of the specific plant or animal, is in the seed not in its environment. For in every environment in which the seed can germinate, it grows into its own kind. Of the germs of various species Prof. Newcomb says: "In everything which constitutes a material quality they are identical. Yet they differ as widely as a clam, an oak tree, or a philosopher. Since this difference does not consist in the arrangement of their molecules, we may properly call it *hypermaterial*."

The hypermaterial origin of life is the more evident since, in the whole material universe throughout all space and time as known to us, the beginning of life in any organization is conditioned on the previous existence of living matter from which it proceeds. Life, then, is the cause of organization, not its product. Whatever the previous elaboration of matter needful in its lower grades, it is the power of life which *organizes* matter and in and through the organization reveals itself. Science has never been able to reduce it to a lower level or to identify it with chemical or mechanical energy. As "*aquosity*" reveals the chemical or elemental energy which produces water, vitality reveals the power of life which produces organisms.

As the evolution proceeds organic matter is elaborated till it becomes capable of being a medium of manifesting sensitivity. And again matter is elaborated in higher and higher forms of animal life till it

* Biology, §§ 61, 55. Vol. I., pp. 153, 167.

becomes a fit medium for the manifestation of reason, free-will and rational motives and emotions. Thus that the power manifested in the facts of personality is an immaterial and spiritual power is entirely in harmony with evolution and analogous to the revelation of new powers in all its stages.

The force of the argument is enhanced by the fact that the power revealed at each grade is not only new but higher. As a greater power having a wider and more complicated reach, it cannot have been caused by the inferior power. This superiority is seen in the facts that the lower power is held in abeyance by the higher, and that the higher reacts with dominant energy on matter in all its lower planes. Electricity and magnetism in lifting light bodies overpower gravitation. All mechanical forces, molar or molecular, are held in abeyance in the presence of the elemental force. This is illustrated in Faraday's representation that the chemical force in a drop of water is equivalent to the electric force in an ordinary thunder-shower. The elemental force is held in abeyance in the presence of life. So long as life continues, the composite substances in the tissues of the body, notwithstanding continual waste and supply, retain their organic integrity, and the food is digested into the living tissues in spite of chemical affinity. But the moment life ceases, the elemental force resumes its sway and decomposes the body into its inorganic constituents. Life also reacts with resistless power on inferior nature. The delicate germ of an acorn forces itself up through the oppressing mould, transforms the earth, air and water into its own organic substance, and overpowering the gravitating force of the whole earth, lifts the immense and growing mass into the air and in defiance of all storms holds it there for centuries. But when death comes, the chemical and mechanical forces begin to tear it down.

And this power of life, whenever and however it first appeared, though it were only in a single cell, immediately began to react on nature in its lifeless and inorganic forms, and to modify, elevate and adorn it. Then, when the organic matter is so elaborated as to be capable of higher manifestation, sensitivity appears. Here anew we have a power reacting on the plants and on inorganic matter, pushing and spreading itself everywhere, till the waters, the air and the land are filled with living creatures, visible or microscopic, which continually lift the lifeless matter into living organisms, and unfold living organism to the capacity of manifesting higher and higher powers of life. In the view of the first appearance of sensitivity *Noiré* breaks into apostrophe: "Thou almighty, despotic, inorganic world, avert in an instant the warfare which threatens thee, crush out of being this weak, powerless little point of sensitivity. It does it not; it cannot do it; it is

the unconscious, stiff, bound-up world; and therein lies the great superiority, the future victory of this little point of life over the giant forces of the universe.”*

As the tissues of the animal are elaborated, they become in the human organization the medium for manifesting reason, free-will and rational sensibility. In the germination and growth of plants and animals life acting in unconsciousness is a directive energy, ordering and guiding all the particles, as they are taken in, to realize the plan of a complicated organization. But when reason appears a power is revealed which in conscious intelligence and freedom orders and controls the energies and resources of nature to express the truths and ideals of reason and to accomplish the chosen ends of free-will. It is a power which discovers nature's secrets, declares its laws and uses its resources and powers for its own ends. As man advances in civilization, he civilizes nature; man's selection displaces natural selection; man's thoughts become imprinted on the surface of the whole earth. Man is a lord of nature; as it is written in Genesis: “God created man in his own image, and gave him dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.” Here again we see that evolution, if true as a law of nature, is consistent with the fact that there is a spirit in man.

6. Matter in the higher grades does not create or originate the higher power, but only reveals it. It reveals it as an effect reveals its cause. It is not the sphericity of a rain-drop which causes the attraction, but the attraction which causes the sphericity and is revealed in it. It is not the crystalline structure which originates the symmetrizing energy, but the symmetrizing energy which causes the crystallization and is revealed in it. It is not the “*aquosity*” of water which causes the chemical affinity; but the chemical affinity combining the oxygen and hydrogen causes the “*aquosity*,” and is revealed in it. And it is in analogy with all these when we say that it is not organization which causes life, but life which causes the organization and is revealed in it. In complete analogy with all these conclusions of science, when sensitivity appears, we refer it to some hypermaterial power revealing itself in the animal organization; and when personality appears we refer it to a hypermaterial power revealing itself in the human body. And this necessity is the more apparent from the facts that physical science cannot identify either sensitivity or personality with chemical or mechanical force, and that with its most powerful instruments of observation it cannot detect any difference between the germinal matter of plants, the lower animals and man.

* Die welt als Entwicklung des Geistes; ss. 362, 363.

7. The evolution of the material universe through these successive grades is a continual revelation of hypermaterial power; of a power not resident in but revealed through the matter. The evolution of the visible universe is perpetually revealing a universe that is invisible. Lotze says: "The ancient atomists regarded the atoms as the ultimate elements of all reality, the unconditional and true being (*Seiende*), which, existing before all things, was the necessary and independent ground of every possible creation." To the moderns, he says, they have a very different significance; and thus the ancient atomism necessarily involved materialism but the modern does not.* Accordingly he regards the world-process as the evolving of "a creative spiritual principle." Mr. Spencer says: "By the persistence of Force we really mean persistence of some Power which transcends our knowledge and conception. The manifestations, as occurring either in ourselves or outside of us, do not persist; but that which persists is the Unknown Cause of these manifestations. In other words, asserting the persistence of Force, is but another mode of asserting an Unconditioned Reality, without beginning or end."† So the Duke of Argyll says that the cause of crystallization is not referrible to "the old arrangement which is broken up or to the new arrangement which is substituted in its stead. Both structures have been built up out of elementary materials by some constructive agency which is the master and not the servant, the cause and not the consequence of the movements which are effected and of the arrangement which is the result. And if this is true of crystalline forms in the mineral kingdom, much more is it true of organic forms in the animal kingdom."‡ These three writers, representing widely different schools of thought, find themselves agreeing in the same conclusion, that the evolution of the material universe reveals a hypermaterial power. To the same conclusion our own reasoning forces us. When a globe reaches the condition in which life is possible life appears. When organized matter reaches the condition in which sensitivity is possible, sensitivity appears. When animal organization reaches a condition in which personality is possible, personality appears. At each grade of the evolution a power of the unseen universe is revealed in the seen, a hypermaterial power is revealed in the material.

Prof. Fiske gives the following definition: "A materialist is one who regards the story of the universe as completely and satisfactorily told, when it is wholly told in terms of matter and motion without reference to any ultimate underlying existence of which matter and motion are

* Mikrokosmos, Vol. I., pp. 34, 35.

† First Principles, p. 255, § 74.

‡ The Unity of Nature, Contemporary Rev., Sept., 1880.

only the phenomenal manifestations."* If we accept this definition, the facts which evolution, if true, must account for, are incompatible with materialism, and materialistic evolution is unscientific and irrational.

8. In man at last a being appears in nature who also rises above nature, and in his personality is autonomic and autokinetic, self-directing and self-exerting, and thus free from the necessary sequences of nature. Thus he differs from all inferior beings, which, though above all which had preceded them in the evolution, yet are merely powers in nature capable of acting only as acted on in its invariable and necessary sequences.

In the evolution in its lower stages we see the revelation of a hypermaterial power, positing in nature a new energy which never rises above it. In the evolution of the human organization we see the revelation of the same hypermaterial power, but now bringing into nature a personal being, rational, free and above nature, yet acting in and through nature, capable of manifesting his own thoughts and realizing his own ideals and ends in nature, and of effecting what nature of itself could never have effected; above nature in his personality and thus in some sense a being independent of it; and yet dependent on the hypermaterial power which by his existence he reveals; and revealing that power itself, not as a power or cause only, but as the Energizing Reason, the personal God.

9. I therefore conclude that, if evolution be found true even to the extent that the living organized body of man was originally evolved from an inferior species of animals, the evolution would still be compatible with the personality of man and would constitute no valid objection against it.

The human mind cannot escape the dualism expressed in the words matter and force, body and spirit, nature and the supernatural, the finite and the infinite, the universe and God. All investigation brings us to it as a fundamental reality. Every system of thought which excludes the one or the other is necessarily one-sided and false. The two cannot be identified. They can be brought into a unity of thought only by their relation to each other.

VI. Scientific evolution, if true, demands the existence of the personal God, the absolute Reason energizing in all that is; but may modify some common opinions respecting Him and His relation to the universe.

Evolution leaves unchanged the common teleological argument from particular arrangements and adaptations. But in its essence as evolu-

* Darwinism and other Essays, p. 50.

tion it sets forth and emphasizes the teleological character of nature in its entirety as being progressively evolved from lower to higher in the continuous realization of an ideal or plan. This argument belongs to Natural Theology and will not be further considered here. I have already shown that evolution is compatible with theism. I propose now to show that scientific evolution demands the recognition of God as necessary to the ongoing of the evolution.

1. Evolution presupposes a higher power previously unknown, which lifts matter from the lower to a higher stage, revealing itself therein. It is of the essence of evolution that the higher comes down to the lower, evolves it to a higher condition, and reveals itself in so doing. And this is evolution as explained by scientists. Accordingly Prof. Le Conte says: "Evidently in the universe as a whole, evolution of one part must be at the expense of some other part. The evolution or development of the whole Cosmos, of the whole universe of matter, as a unit by forces within itself according to the doctrine of the conservation of force, is inconceivable. If there be any such evolution at all comparable with any known form of evolution, it can only take place by a constant increase of the whole sum of energy, *i. e.*, by a constant influx of divine energy; for the same quantity of matter in a higher condition must embody a greater amount of energy."* We are shut up to the alternative either of admitting that all powers, alike of mind and matter, existed potentially in the primitive homogeneous stuff; and if so, the stuff was not homogeneous; or else of admitting a power above the homogeneous stuff, causing the evolution and revealing itself in higher and higher forms in its successive stages.

I suppose intelligent evolutionists would shrink from positively accepting the former position, at least if they had thought far enough to see the contradictions and insuperable difficulties involved in it. But it is remarkable that evolutionists attempt to explain all the higher powers manifested in the universe as identical with the lowest and as manifestations or transformations of it. All force, chemical, vital, rational, they attempt to explain as identical with mechanical force, which is force in its lowest form; and that force they still for the most part explain as a property inherent in matter itself. They conceive of the universe as the lowest developing itself into all that is. Topsy's words, "I 'specks I growed," are exalted into a cosmogony and become the first principle of science. But development, thus understood, can develop only that which already is in the thing developed. "If man is in this sense developed from the brute, he is only a brute de-

* Prof. Balfour Stewart: Conservation of Energy: Appendix by Prof. Le Conte, pp. 199, 200.

veloped. If the universe is the development of matter there is nothing in it above matter. The development of the lower is only the elevation and expansion of the lower, not a change of its inferior nature nor an origination of anything higher in kind. It is the lowest, with its necessity, its unintelligence, its soggy materialism, pulsating higher and higher, circling wider and wider, till it fills and characterizes all. It is the Titans piling up the mountains to scale the heavens and dethrone the gods; but however high they climb and wide they rule, they are still only Titans, earth-born giants.*

Theism presents the contrary conception: "In the beginning God." In these first words of Genesis, at one vault the thought reaches the Highest. The action of the universe is no longer the lower lifting and expanding itself with all its imperfection and its blind necessity, but always the higher descending to the lower to lift it up. Thus the action of God in Christ, descending to man and working in human conditions and limitations to lift man up, sets forth the constituent principle of the universe. The movement is not of the lower widening its sphere and increasing its power; but always of the higher going down to the lower to impart to it new gifts, endow it with new perfections, and thus to extend the reign and diversify the manifestations of its own superior and richer potencies.

Evolution in its true significance is accordant with this principle of Christian theism. It requires the presupposition of a higher power acting on matter in its lower condition, evolving it to a higher, and therein revealing itself. Men talk of effects produced by law, or by the order of nature, and thus in a cloud of words hide this essential necessity of evolution from view. But, as Lotze says: "As little as we regard the idea of *disorder* as a factual and moving principle in an unregulated succession of changes, so little can we regard the idea of *order* as the efficient and sustaining original cause of an orderly series of events."† It is a higher efficient power, and not merely a law or order which is presupposed in evolution and revealed at every stage. Within the limits of empirical science the facts of evolution are noted in their relations of coexistence and succession as they present themselves to our observation. When beyond those limits we seek for the rationale or philosophy of the facts, as evolutionists in their speculations are wont to do, we must recognize power of a higher order revealing itself at each stage of the evolution and accounting for it.

2. In this hypermaterial power, as the ultimate and continuous

* The Kingdom of Christ on Earth, by Prof. Samuel Harris, pp. 130, 131.

† Mikrokosmos. Vol. I., p. 69.

source of the evolution, all the powers successively revealed in the evolution must exist potentially without limit or condition.

This is the Power, the existence of which Spencer postulates as "a necessary datum of consciousness;" and of which he says: "Deeper than demonstration, deeper even than definite cognition, deep as the very nature of the mind, is the postulate at which we have arrived. Its authority transcends all other whatever; for not only is it given in the constitution of our own consciousness, but it is impossible to imagine a consciousness so constituted as not to give it."* This Power is what we call the Absolute. It is of this Power and of this alone that the metaphysical axiom or principle, on which modern physical science rests, is true; the principle that the sum of energy, potential and actual, is always the same. We know that it cannot be true of this finite universe in which we live and of which we have knowledge; for in this universe matter is known to be continually evolving into higher conditions and revealing higher energies; at the same time from this universe as a whole, force is continually in a process of dissipation without known return. Physical science itself thus gives decisive evidence that it is not true of the universe known to us that the sum of force in it is always the same.

It is also evident that this axiom cannot be true of any finite universe. The materialist conceives of the universe as a definite quantity of matter and force, conceivably susceptible of being measured and expressed in a row of figures. It is bounded in space. It is a closed sphere having within itself all the forces by which it is sustained in being and by which one part acts on another. It is a machine; all its action is mechanical; its forces are so adjusted that every expenditure in one part is exactly restored from another; it repairs its own waste, mends its own breakage, sustains itself in being, while supplying the force by which all its parts act and react on each other; and it has sustained itself in thus acting from all eternity and will sustain itself without end. Such a machine involves the absurdity of a perpetual motion; an absurdity the same in principle whether the machine be small or large, simple or complicated; the forces must sooner or later come into equilibrium and all motion must cease. In the case of a finite universe there is the additional difficulty that the machine must sustain itself in existence.

If now we suppose the universe to be a continuous manifestation of absolute Power, whether with Spencer we call it the Unknowable or with the Theist call it God, then evidently the universe which is the manifestation of the Absolute Power does not contain the unchange-

* *First Principles*, pp. 98, 258; §§ 27, 76.

able sum total of all power, for its existence is relative to and dependent on the Absolute power; the evolution of the universe is simply the manifestation of that power as it progressively reveals itself in finite things.

But of the Absolute Being the axiom is true. Should the universe known to us be exhausted of all its energy and vanish away, all the power which had sustained it and acted in it would still exist, either active in some other universe or potential in the Absolute Being. And at any given time the power exerted in creating and sustaining all finite worlds has caused no diminution or exhaustion of the infinite power.

3. The Absolute Being is a rational or personal being. It is the absolute Reason.

What the Absolute Being is cannot be ascertained *a priori*. We know what it is so far as it is revealed in the universe. It must have all the powers necessary to account for the universe. These powers must be in it, eternal, unlimited and unconditioned. There is Reason in the Universe; therefore there must be Reason in the Absolute Being revealed in the universe.

In nature we find both efficient and directive power. No one but the complete positivist disputes the existence of efficient power. The directive is scarcely less common and obvious. We find it in the instinct which guides myriads of animalcules like the coral zoophytes, and swarms of insects, like bees and ants, to work together to build a structure according to a plan. We find it in germs developing each into its own kind; in the growth of living organisms in which the different tissues and organs are elaborated, each in its own kind and place, and the action of every part continuously directed to the realization of the plan of the whole; in the evolution of species, tending to the improvement of the species from generation to generation, and to the evolution of new species of a higher and higher order; and in the evolution of the Cosmos itself, expressing truth, conformed to law, realizing systems, evolving higher and higher orders of beings, and realizing results the apprehension of which constitutes science and reveals all nature constructed according to the truths and laws of reason.* Thus we have in nature itself manifestations not only of efficient power, but of that directive agency which belongs only to Reason.

We also find Reason in the Universe in ourselves and our fellow-

* Sir Isaac Newton, in the General Scholium to his Optics, says: "The instinct of brutes and insects can be nothing less than the wisdom and skill of a powerful ever-living Agent, who, being in all places, is more able by his will to move all bodies and thereby to form and reform the parts of the universe, than we are by our will to move the parts of our bodies."

men. Evolution, ever revealing higher and higher powers, mechanical, elemental, vital forces, ultimately reveals Reason in personal beings. Therefore, since the evolution is the progressive revelation of the Absolute, the Absolute is revealed as Reason, not less than as the source of the efficient powers which cause motion, and chemical combination, and life.

Therefore the ultimate source and ground of all that exists is the Absolute Reason or Spirit, in which all the powers revealed in the evolution of the Universe exist eternal, unlimited and unconditioned, and by their continuous energizing progressively express in finite realities all rational truths, laws, ideals and good, and evolve the universe in the order and beauty of a rational and moral system.

4. Finite beings have real existence distinct from the Absolute, and are endowed with peculiar properties and powers by which they act and react on each other according to the constitution and law of their being and are brought into unity in various relations.

Pantheistic philosophy loses the finite in the infinite. The finite has no real being; all reality is in the absolute or infinite. The finite returns to the absolute in the absorption and extinction of itself.

Agnosticism, in like manner, recognizes reality only in the *thing in itself*, out of all relation to our faculties and utterly unknowable by us.

Theism accepts neither of these philosophies but regards the finite as having its own distinctive reality, always dependent on God. That I exist in my own individual personality, that the outward world exists distinct from me, are ultimate data of consciousness underlying all human thought and all human knowledge. If, losing myself in Pantheistic or Agnostic speculation, I deny the reality of the finite and set it aside as an illusive appearance, my denial involves the impossibility of knowledge. Even the knowledge of the absolute is lost, for I have knowledge of the absolute only as necessary to account for the finite; and if the finite is unreal the absolute must be unreal also.

On the other hand the existence of absolute power is a primitive datum of consciousness equally essential to all thought and all knowledge. If I say that the universe itself is the All, then I deny this primitive datum, and the All becomes a mere aggregate of littlenesses, a mere sum of finites having no eternal and unconditioned cause or ground. And on this supposition evolution loses its significance or destroys itself in contradictions.

The finite universe, physical and rational, has reality of its own as the reality in which God reveals his power, his wisdom and his love; the garment woven in the loom of time by which we see him. Aside from its relation to and dependence on God it cannot exist.

While personal beings and impersonal both exist in dependence on God, yet distinct from him, they are also distinguished by essential differences from each other. We do not perceive the impersonal in its individuality but only infer its individuality in thought. We know the impersonal as real, yet only as we grasp it in our own intelligence; only as acting necessarily as it is acted on in the fixed course of nature; only as expressing the thought and realizing the ideal and end of the absolute reason energizing in and through nature. A person on the contrary has immediate knowledge of himself in his own consciousness, and of his individuality and identity; from this knowledge the idea of being arises. He has received so much of the divine that he stands out (exists) in his own personality, distinguishing himself both from nature and from God; he knows himself as an energizing Reason, capable of creating and realizing ideals of his own, and of expressing his own thoughts and realizing his own ends in nature by the efficient and self-directing energy of his own rational free-will.

5. The finite universe is created by God in the sense that it depends on him for its existence.

Evolution presents no peculiar objection to creation. Since it concerns not the beginning or ultimate ground, but only the ongoing of the finite universe, the doctrine of creation is as compatible with it as with any other physical theory.

We may also affirm that evolution requires a doctrine of creation. The theory always assumes a beginning; and a beginning is also necessarily implied in the fact that the evolution must come to an end. There must then be a cause antecedent to this beginning. Evolution also always assumes a definite condition and arrangement at the beginning and thus requires an antecedent cause of the arrangement. But matter cannot have been the cause of this beginning and pre-existent arrangement; for the evolution itself includes the entire activity of matter. If matter by its own action arranged itself and started the evolution, then evolution, even as a theory merely of the ongoing of nature, breaks down; since the most important action of matter was antecedent to the evolution and originated it. Also, since matter is unintelligent and void of freedom, it could not have passed from previous inaction by exerting itself, calling its powers forth from their potentiality to active energy, nor could it have been aware of any reason for so doing. Only a Reason energizing in freedom could do this. But if Energizing Reason is the ultimate ground of the existence of matter and all its forces, then the beginning of the evolution can be accounted for. Evolution, therefore, demands a doctrine of creation in the sense explained.

And we need not go back to the beginning to prove this. Matter in

every condition in which it is known by man presupposes its previous existence in a different condition. Matter perceptible by us presupposes atoms and molecules which transcend our perception. Molecules presuppose elemental atoms of diverse powers, combining in definite mathematical proportions and revealing elemental forces; and are thus known to be themselves "manufactured articles." Gross matter compels the assumption of ethereal matter. The ether compels the assumption of secondary, tertiary and still finer orders of atoms, and of the atom itself as a revolving vortex. Matter in motion leads to the supposition of motionless matter entirely imperceptible by any senses like those of man. If we drop the conception of gross matter with its atoms and molecules, and substitute for it the dynamical conception, then the matter becomes but a phenomenon of which the force occupying the space is the *thing in itself*, a force distinct from matter as we know it, and antecedent to it. Matter exists in a continuous process of transition, or, as the followers of Heraclitus would say, of flux, and thus exists not of itself but of a power acting on it and evolving it. Therefore matter in whatever condition known or conceived by us implies a pre-existing cause.

Here, again, the matter which is evolved through these successive conditions cannot be itself the ever pre-existing and eternal cause of the evolution. For matter in its continuous evolution is limited in space, time and quantity, and thus in its essence is finite; and the finite cannot evolve itself into the eternal, the infinite, the unconditioned. If matter is the eternal cause of the evolution, then at every point of time in the evolution the matter evolved is self-existent and self-sustaining, and contains potentially all the energies revealed in the endless evolution, without limit or condition. This predicates of matter all the attributes of absolute being; it is the old absurdity of identifying the finite with the infinite and predicating of the finite all the attributes of the infinite and absolute being. The contradictions already noted as inseparable from this error necessarily follow. At whatever point in the evolution we conceive of the finite universe, we know by an invincible necessity of thought that it rests on some power beyond itself, which is self-existent, is unlimited in space and time, and contains potentially all the powers which the universe reveals. Thus at every point of its progress the evolution demands a creator on which the ever-evolving matter depends for its existence as well as for its evolution.

This ultimate cause or ground of the universe can only be the absolute Reason in whom all power is eternal and potential. This absolute Reason is God, capable of being at once subject and object of his own action, eternally knowing the universe archetypal within his own

thought, and eternally existing independent and unconditioned. If he creates he is able to do so in the free exertion of his power; and whether he creates or refrains from creating there is always reason for his action in his own perfect wisdom and love.

Mr. James Sully maintains that evolution is incompatible with creation; and this is a common opinion both of evolutionists and others. This incompatibility exists if creation is an instantaneous act in which the universe with all its arrangements is finished. This was Augustine's conception. From it comes Deism; for if the universe was thus finished at the creation, it might be left by God to go of itself. But according to Christian theism this is not the idea of creation. The universe is not a rigid, finished machine, manufacturing itself and its own driving power and running itself. Nature is not a finished product. It is a continuous progress, a growth evolving higher and higher powers and revealing more and more the thought, the wisdom, the love and power of the Creator. And in nature God is ever active: "He is not far from each one of us." With this view of God's action in nature evolution is consistent. Then the essential significance of the doctrine of creation is simply this: The universe at every point of time is distinct from God but dependent on him for its existence. At whatever point the universe is thought of, it must be thought of as dependent for its being, as well as for its potential powers and its laws, on the absolute Being distinct from itself. At every point of time God is the *præ* of the universe, and is its cause. The doctrine of creation, therefore, is compatible with evolution, as it is with any other law of the ongoing of nature.

How God creates and sustains the universe, how the infinite reveals itself in the finite, are unanswerable questions. It is the part of wisdom to make no attempt to penetrate this impenetrable mystery. It is enough that at every point of time we have, "In the beginning God."

6. God is immanently active in the universe, sustaining, evolving and directing its energies.

Some skeptical scientists sneer at theism as "the carpenter theory of the universe." Those who teach that there is no force in nature but the mechanical, are the ones who hold to the carpenter theory of the universe; for according to them it is a machine; all chemical, vital and spiritual powers are merely mechanical forces, and all beings, animate and inanimate, are merely parts of the machine. Theism, recognizing the universe as the continuous manifestation of the supreme and ever-energizing Reason, is at the farthest remove from any mechanical theory. This mechanical conception of the universe was characteristic of the English Deists. It must be admitted that theists have

sometimes conceived of the universe as a machine and of God as the mechanician, who made it ages ago and set it running. God's immanent action has been ridiculed as disclosing the imperfection of the machine; as if a clock-maker were obliged to stand by the clock always and to move its wheels and hands with his own finger. According to this conception any direct action of God in the affairs of the universe would be an arbitrary interference with it and interruption of the course and law of nature, and contrary to the very constitution of the machine.

Theism, on the contrary, must recognize God distinct from the universe, yet immanently active within it. So Paul represents it: "He is not far from each one of us; for in him we live and move and have our being."* So Goethe pictures it:

"What were a God who but with force external
Has set the All about his finger circling!
He from within must keep the world in motion,
Nature in him, himself in nature cherish;
So that what in him lives, and moves, and is,
Doth ne'er his power nor e'er his spirit miss."†

* Acts xvii. 27, 28.

† "Was wär' ein Gott, der nur von aussen stiesse,
Im Kreis das All am Finger laufen liesse!
Ihm ziemt's, die welt in Innern zu bewegen,
Natur in Sich, Sich in Natur zu hegen;
So dass, was in Ihm lebt und webt und ist,
Nie seine Kraft, nie seinen Geist vermisst."

(*Sprüche in Reimen; Werke; Stuttgart Ed. Vol. I. p. 167.*)

These lines must have been suggested by those of Virgil:

"Principio cœlum ac terras, camposque liquentes,
Lucentemque globum lunæ, Titaniaque astra
Spiritus intus alit; totamque infusa per artus
Mens agitat molem, et magno se corpore miscet."
(*Æneid VI., 724-727.*)

Similar are Pope's lines:

"All are but parts of one stupendous whole
Whose body nature is and God the soul;
That changed through all and yet in all the same,
Great in the earth as in the ethereal frame,
Warms in the sun, refreshes in the breeze,
Glow in the stars and blossoms in the trees,
Lives through all life, extends through all extent,
Spreads undivided, operates unspent."

Essay on Man, Ep. I.

In representing God as immanent in nature there is danger of identifying him with nature or submerging him in it, and so sinking into Heathenism, Pantheism or Materialism. Dr. Caird, in his recent work on the Philosophy of Religion, has, wittingly or unwittingly, taken positions which logically involve Pantheism. Theism recognizes God as always supernatural, above nature, not submerged in it; as always distinct from and above the universe while immanently active in it. We may have an intelligent idea of this immanence at least in the following particulars.

First, the universe is always dependent on God for its existence. Matter dynamically considered is no more than points of force occupying space. The existence of the material universe depends on the continued action of these forces. Should it cease for an instant the universe would vanish. But force, independent of being, is unthinkable. Its existence necessarily carries our minds to a Being transcending matter, that is, to God. God is immanent in nature because it depends on God for its existence and for all its powers. No analogy of the action of finite beings on one another is adequate to explain the action of the infinite on and through the finite. Sir Isaac Newton compares God's immanence in nature to the immanence of the spirit in the body, sustaining and directing its energies; Edwards to the action of light on a portrait, sustaining it in existence. It may be compared to the action of a mind sustaining a process of thought. But however inadequate our conceptions of the *mode* of God's action on the finite, the fact is intelligible that finite beings continuously depend on him for their existence.

Secondly, God is immanent in nature by his directive agency. A directive agency is as evident in nature as the efficient energy. God is continually guiding the energies of nature as they work on harmoniously to realize a gradually evolving result.

Thirdly, God is immanent in nature developing or evolving it into new and higher forms. It has been shown that the process of evolution is a progressive elaboration of matter to higher forms and the revelation of energies of higher orders. These energies are eternal and unconditioned in God. They reveal themselves in the evolution of the finite universe. So Prof. Le Conte says: "The forces of nature I regard as an effluence from the Divine Person—an ever-present and all-pervading divine energy. The laws of nature are but the *regular* modes of operation of that energy; universal because he is omnipresent, invariable because he is unchanging."* And as God effuses of his infinite energy into the finite, the evolution not only goes on

* Man's Place in Nature: Princeton Rev., Nov., 1878, p. 794.

continuously in time and space, but reveals higher and higher powers in higher and higher orders of being.

Thus, as we look on nature, it seems like a transparency, on which the motions of an invisible actor are revealed in the shadows thrown on it from the light behind. So nature is the veil before the most holy place, on which God, acting in the ineffable light of the spiritual world, is perpetually revealing himself in action.

Lastly, in the moral system God reveals himself in human history by his action in moral government and redemption; and is present in the Holy Spirit, in a manner analogous to the continuous effluence of his energy into nature, and working with influences adapted to rational moral agents to lift them to higher planes of being, to bring them to new and spiritual births into the higher and divine life.

7. God's action in creating, sustaining and evolving the universe is individuating.

We must not forget that any analogy from the action of finite beings on each other must be an inadequate representation of the action of the Absolute Being in creating, sustaining and evolving the finite. But by the clew put into our hands in the knowledge of the finite we may feel our way to some real though inadequate knowledge on this subject.

The Absolute, according to the agnostics, is that which exists out of all relations. Then it must be out of all relation to the finite. Then it cannot be the absolute Power in which all the known powers of the universe originate, as Spencer regards it. Then it follows that we are as incapable of knowing that it is, as of knowing what it is. We are driven to complete Positivism. There is no half-way house of Spencerian Agnosticism, between complete Positivism which involves complete Agnosticism, and Theism.

According to theism the Absolute is not that which exists out of all relations and therefore cannot be in any relation to anything; but it is that which exists out of all necessary relations. It is capable of existing out of relation to anything; it contains all potencies in itself; if other beings come into existence it is only as dependent on it. It is independent of them.

Our knowledge of the finite universe is the occasion on which the rational intuition arises that the absolute being exists as the ultimate ground and cause of the universe. Thus in the necessary datum of consciousness by which we know that the absolute exists, we know that it is independent of the finite universe, and yet related to it as its ultimate ground and cause. We know, therefore, that it is endowed with all powers adequate to originate and account for all the finite universe.

Carrying with us, therefore, this knowledge, we can think of the possibility of the absolute's existing alone without the finite universe. When we attempt to push our thought beyond the universe by which we know the absolute, and to apprehend the Absolute Being as existing alone, we can think of it as the Absolute Reason which is God, at once the subject and the object of his own eternal intelligence and power, of his own eternal wisdom and love and might. The eternal plenitude of all the power manifested in the universe exists in him potentially. Those powers which we know revealed in the universe as his, we carry back beyond their manifestation and refer them to him in his eternal and independent being as existing in him potentially without limit of time, space, quantity, or condition.

Then even space and time would have no more than a potential existence in the absolute being. Space and time as we now know them derive all their content from our knowledge of finite beings existing and acting in them. But when passing in thought beyond the finite universe to the absolute existing independent and alone, we find no content for the idea of space and time. Nothing is left of them but the unlimited possibility of finite beings existing and acting in time and space. But a possibility, if real, presupposes a power; and unlimited possibility supposes an unlimited power; and unlimited power presupposes an absolute, unconditioned being. Thus the ultimate metaphysical idea of space and time is the idea of an unlimited possibility of the existence of finite beings. And this possibility arises from the unlimited power of God. The existence of space and time, therefore, is a possibility dependent on the power that is eternally potential in God. If there were no God there would be no possibility of the existence of finite beings; therefore there would be no time and space. These are eternal and archetypal in the Absolute Reason; God is not conditioned by them as existing independent of himself. They are objectively real to finite beings, conditioning their existence.

The idea of potency as distinguished from active power, in other words, of a power that is potential as distinguished from actual, is derived from our consciousness of our own reserved and unused powers. When voluntarily directing our energies to a particular end we are conscious of power to arrest the action and to direct the energies otherwise. This power we are conscious of having when we do not exercise it. It is in us potentially, though not actually in exercise. This distinction is applied in science to physical forces; but the application is wholly anthropomorphic, and as so applied it is often difficult to see the significance of it, and the distinction is often misleading. But it has real significance as applied to the reserved force of a free agent which he can call into action at will. Since God is a personal being we predicate potential

energy of him in its primitive and legitimate significance. And thinking of him as self-existent and independent, we say, with the full meaning of the words, that all powers manifested in the universe are potentially in him without limit or condition.

From this idea of God existing eternal and everywhere in the plenitude of power, and in the order of thought always the antecedent and cause of the universe which is ever dependent on him, we proceed to inquire how he reveals himself in finite things. I answer that the potential becomes the actual. The powers eternally competent to create, sustain and evolve the universe, act in creating, sustaining and evolving it. And this action is conceivable by us only as an individuation. The powers which had existed potentially as an eternal, unbroken, unchanging and undivided plenitude, now act in points of time and place, circumscribe themselves, as it were, within limits, and thus become individuated. Thenceforward as individuals having their own properties and powers, they have a reality of their own and act reciprocally in time and space on each other. And as the plenitude of power more and more infuses itself into time and space, the manifestation of the divine power is not only widened in space and prolonged in time, but the power in its individuation is intensified, and beings of higher and higher powers appear. Thus the universe which from eternity had existed potentially in God, is perpetually becoming actual in space and time by the individuating action of God, and is thus progressively revealing what God is. "The heavens declare the glory of God and the firmament shows the work of his hand."

Creation, therefore, is not originating something out of nothing. On the contrary in creating, the Absolute Being calls into action power eternally potential in his infinite plenitude: and this power, energizing under the limits of space and time and thus individuating and revealing itself, becomes cognizable as a finite reality or being. When the power is individuated in and occupies space, it is a body and capable of acting in space and time on other bodies as it is acted on. When the power is individuated as rational free will acting consciously in time and space and persisting in unity and identity, it is a person energizing upon nature from above it.

Hence the difference between the finite and the infinite or absolute is not the difference of the phenomenal and the real, as the Pantheists and the Agnostics teach. And some theists run into the same error in attempting to escape from the mechanical idea of the universe and to conceive of God as immanent in nature. Christianity teaches that in redeeming man from sin God becomes human in Christ; he subjects himself to human limitations and conditions to lift man to the divine likeness and to communion with God. In this humiliation of the Son

of God we have set forth the principle of the moral law and the moral system, the law of love; the strong must help the weak; the higher must go down to the lower to lift them up. Evolution discloses an analogous law dominant in nature, the higher going down to the lower to lift it up.

This humiliation of the Son of God and his limiting himself within the conditions of humanity is also the most complete revelation of God. As he veils and confines himself in human nature we see most clearly and fully what he is as God, and learn that God is love. To this also his creative action is analogous. When he would reveal himself in creation it is only by confining and individuating his wisdom, love and power within the limits of space and time and the finiteness of nature and of man. Thus the humiliation of the Son of God, in which God becomes human to make man divine, is not merely central in the moral system and in redemption, but seems also to set forth the dominant principle in the constitution of the universe:—The higher goes down to the lower to lift it up; the great energizes within the limits of the little to make it great, and to express and reveal its own greatness.

Buddhism teaches that evil consists in individuation; the existence of finite beings as individuated and distinguished from the Absolute is essential evil, and redemption is possible only by reabsorption into the Absolute. This is a pantheistic and pessimistic conception entirely foreign from theism. According to theism the existence of finite beings however limited is a good, as participating in and revealing the divine. In its lowest forms it is participant in the divine power and reveals it; in its highest forms it is participant of the divine reason and reveals it, and is capable of participating in the divine wisdom and love, and of acting and effecting results in accordance therewith. And the finite universe is progressively receptive and expressive of more and more of the divine perfections forever. Evil begins in the acts of free agents voluntarily isolating themselves from God and the universal system, in living supremely for themselves.

8. God's action in the universe is a continuous realization and expression in the finite of a plan or ideal eternal and archetypal in the absolute Reason.

In the absolute being are infinite possibilities. All power is in him potentially. These possibilities are not indeterminate, as if one thing were as possible as another. What is possible and what impossible is determined by Reason. The eternal truths and laws of Reason are, as I have said, the *flammania mœnia mundi* which no power can set aside or overpass. That which is absurd to Reason cannot be made real by power. This is no limitation of the Absolute, but only the affirmation that the absolute is endowed with all perfection; is Reason and not

unreason. The universe is grounded in Reason. Science is continually demonstrating that the universe is the expression of thought, accordant with law, and realizing a plan. But if there is thought there must be a thinker; if the universe reveals a rational plan there must be a Reason which plans it.

The universe with all its possibilities and its actualities exists eternal as an Ideal or *Mundus Intelligibilis* in the divine Reason. God sees it as the expression of the eternal truth of Reason, conformed to its eternal law, realizing its ideal perfection and the good which Reason judges worthy. God's action is the progressive realization of this ideal in finite things. It is action which, in the finite universe, continuously and progressively expresses the truths of Reason, conforms to its eternal law, realizes its ideals of perfection, and so realizes what reason approves as the true and highest good. God's action in the finite is the continuous expression and realization of the thoughts of wisdom in acts of love.

That which is nearest to creation in human action is the action of the rational mind creating ideals and expressing them. The poet creates an Iliad and expresses it in rhythmic words; the artist creates an ideal and expresses it on canvas or in a statue; the architect creates an ideal and builds his thought up in stone; the inventor creates an ideal and expresses it in a steam-engine or a telephone. This action is the expression of truth in accordance with law and thus realizes an ideal and multiplies good; and so far it is like the divine action.

In this there is more than an analogy. Reason is the same in kind in man and in God. As when we travel to strange lands, all earthly scenes are changed but the sun and stars are the same, so through limitless space and time, the truths and laws and ideals of reason so far as known are the same to all rational beings. Otherwise science is delusive and knowledge impossible. The universe is the expression of the thought and the realization of the plan of perfect and absolute reason. Nature can be apprehended in human thought because itself was originally God's archetypal thought and in its finite reality is the progressive expression of the divine thought. The mode in which a finite reason acts, by observation and processes of thought discovering facts and advancing its knowledge, is unlike the eternal knowledge of the absolute Being, who sees the end from the beginning. But the unchanging and universal truths and laws which guide the action, the unchanging ideals of beauty and the imperishable worth of the true good are everywhere and always the same.

Thinkers at various times and by various processes have reached the conclusion that the ultimate reality of the universe is *thought*. The truth in this conclusion is that the ultimate reality is absolute Reason, and that the universe is the continuously evolving expression of its

eternal truths and laws, and realization of its eternal ideals and of all that reason sees to have true worth. There is no grander conception than the Biblical conception of the creation: "He spake and it was done;" "God said, Let light be and light was." The universe is the word which expresses the thought of God.

9. God's action, creative, immanent, individuating and expressing the eternal ideal of Reason in finite things, is also a *progressive* realization of his archetypal thought.

As the expression, in the limitations of time, space and quantity, of the unconditioned and unlimited powers existing potentially in him, it must be progressive. Power energizing and realizing results within the limitations of time and space, cannot fill all time and space in an instant. Also, the infinite can never be fully expressed in the finite. We think of the ideal or plan of the universe eternal in the divine mind, as a unity or whole expressing all rational truth and law and realizing all rational perfection and good. But the realization of this ideal in the finite forms of time and space must be forever progressive. We speak of the universe as created by one eternal act. But an eternal act of creation can disclose itself in time only as the continuously progressive manifestation of God's wisdom and power in finite things always dependent for their existence on him. At every point of time and at every limit of space the manifestation of the absolute in the universe is incomplete and the universe is seen to be not finished and perfected, but tending onward to larger and higher manifestations of God.

The universe must be progressive, also, because finite beings exist distinct from God, each having its own constitution and its own peculiar properties and powers. Moreover, these beings are not isolated, in each of which God expresses thought capriciously; but each is part of the rational system which as subject to the truths and laws of Reason has a unity, significance, law and end of its own to which all the parts are related. The progressive realization of God's archetypal thought is not by sweeping away the existing universe and beginning anew, but is in and through the finite universe which already exists in some stage of its development, in which each being has its own constitution and its own relations to the whole, and which as a whole is the realization up to a certain point of a system destined to be continuously realized in higher degrees. Accordingly the results which God effects on a finite being must be limited by its capacity. No power can convince a stone by argument or persuade it by appeals to compassion. A free-will cannot be moved by a lever or pulley, and its determinations cannot be efficiently caused by any physical force; for if this were possible it would be a machine and not a free-will. And the reception

of truth by the intellect is limited by its capacity; a child cannot be taught Newton's Principia or Laplace's *Mécanique Celeste*. So God's revelation of himself to man must be limited by the capacity of man. If he would reveal himself more fully he must educate and develop man to a capacity for receiving it. Accordingly we find that the revelation recorded in the Bible was made progressively. It is also true that the results effected *through the agency* of finite beings must be limited by the finiteness of the agency. The momentum of a body moving at a certain velocity is limited by its mass. It is of the essence of a moral system that results be effected through the agency of finite free-agents; therefore the results must be limited by the powers of the agent effecting them. They may also be modified by the action of free-agents in wilful opposition to truth and right and in disobedience to the law of love. The realization, therefore, must be progressive. But the progressiveness and the limitation which it involves are in God only as the impassable barriers of perfect reason are in him and his action is regulated by perfect wisdom and love; beyond that the progressiveness is only in the finite universe, in which the thought of his reason and the perfection of his wisdom and love are continuously being expressed.

I have said that the universe is the word which expresses God's thought. The word written or spoken which expresses a man's thought is distinct from the man. It thenceforth has an existence of its own expressing to everyone who reads or hears or remembers it the thought of the man. The word once spoken cannot be recalled. But the word has no power to propagate or vindicate itself. On the contrary the finite realities in which God expresses his thought have their own properties and powers, the very power of the absolute circumscribing and, as it were, hypostasizing itself in them. Could the orator utter "words that breathe and thoughts that burn" not in the rhetorical sense alone, words conscious of their own meaning and glowing with energy to realize it in life, could the artist people his canvas with living beings and paint into it motion and sound, and could it be that the mind of the orator thus vitalized his words and the mind of the artist thus energized in his picture, the resemblance would be more complete. Accordingly Lotze says of the divine thoughts expressed in the universe: "The Ideas may well, in the beginning of the universe, have been the determining ground for the first systemization (*verknüpfung*) of things; in its continued preservation and action, on the contrary, it is the efficiency of the particular things or parts which realizes the contents of the ideas."* Finite things, thus having distinct existence,

* *Mikrokosmos*. Vol. I., p. 70.

limit one another, impinging and conflicting; and thus the realization of the universal plan is progressive on account of the finiteness of the things in which it is to be realized. J. S. Mill and others have suggested that it is necessary to theism to admit the eternity of matter, which by its intractableness might account for the fact that the universe does not at once realize every ideal of perfection. But the fact that the powers potential in God become actual in space and time and thus reveal themselves in finite creations, is the complete explanation of the fact that God's revelation of himself in the universe is progressive, and consequently that the universe at any point of time is obviously incomplete. For that the finite cannot be infinite and can exist only under limitation, is an eternal truth of reason which constitutes a limitation of all action and which no power can annul or transcend.

On the other hand, this fact of progressiveness opens to us the universe as always evolving to larger and higher revelations of God's glory and to a more complete realization of all that is true, and right, and perfect, and good, as contemplated in the plan of the eternal Reason.

It is continuously evolving in time. Existing manifestations of the divine wisdom and power are prolonged from age to age, and new developments thereof appear from cycle to cycle.

It may be continuously enlarging outward into boundless space, and that forever. This is impossible to materialism; because it supposes the sum of matter and its forces to be a fixed quantity and therefore finite. Any increase of matter in space would therefore be an addition to that definite amount; any evolution must come to an end; and while it goes on must imply the evolution of new and higher powers without any cause. It is not impossible to the theist, since material worlds are manifestations of absolute and infinite wisdom and power, which the creation of a new world reveals but does not increase, and which, if a world is destroyed, are not diminished but only manifested in another form, or withdrawn from finite observation into the infinite.

God's manifestation of himself in the universe is progressive, also, in the evolution of higher and higher orders of beings and powers. This has been already set forth. I add a few words on the spirit of man, the highest terrestrial product of the creative energy hitherto known. All finite beings inferior to man are completely included in nature. Endowed each with its own properties and powers they act and react on each other, but always in the fixed course of nature, acting as they are acted on. In the process of evolution beings of higher and higher orders appear; but even the brutes with their sensitive life and power of locomotion do not rise above the course of

nature; they act only as they are acted on, and in their instincts are driven by a power and directed by an intelligence not their own. At last organization attains an individuation and development such that it is capable of being the medium for the action of finite spirit; God, infusing into every finite thing whatever energy it is capable of manifesting, breathes into this organism spiritual energies like his own; and man appears in the image of God, conscious of himself as a person endowed with reason, free-will and susceptibility to rational motives and emotions. Here is a being who as to his body is still rooted in nature, but as to his spirit is lifted above nature. This being, thus endowed, assumes the direction of his own energies; he determines the end to which he will direct them, and when and how he will exert them for the chosen end. He reacts also upon nature, takes possession of its resources and powers and directs them to the accomplishment of his own ends. But for the very reason that he is above nature and self-directing, he is no longer guided unerringly through instinct by nature. He investigates, deliberates and determines; he hesitates and doubts; he errs and sins. Being, as we may suppose, spirit in its lowest type and in its infantile condition, it is not strange if the separation from the mother-forces of nature by his birth into the personal life should involve a temporary inferiority to the instinctive life and a consequent liability to a missing of the right way, a moral straying from the eternal Spirit who is the Father of his spirit as Nature was its cherishing mother. But if he strays, it is in his power, through the influences of the divine Spirit quickening his moral being, to correct his errors, to retrieve his faults, to return by his own free-will to union with God in faith and love, to form a character fixed in all wisdom, righteousness and good-will, and thus in the fixedness and the glory of his perfection, surpass the brightest and most glorious of natural objects. "They shall shine as the stars forever and ever." "The righteous shall shine as the sun in the kingdom of their Father." Their differences are described as "one glory of the sun, and another glory of the moon, and another glory of the stars."* This evolution is in complete contrast with that of materialistic monism, which supposes that senseless matter evolves till it awakes to consciousness in man. Theistic evolution supposes God immanently active in nature, individuating and incorporating of his energies in space and time, evolving finite creations with higher powers, till at last he can emit into a material organization a spark of his own spiritual life, a finite spirit endowed with reason and free-will like his own. According to materialistic monism, the man as he wakes to consciousness is

* Dan. xii. 3; Matt. xiii. 43; 1 Cor. xv. 41.

only a product of nature; the individual exists only as the medium for perpetuating the race. "The individual perishes, the All endures;" and Rückert's touching lament of the withering flower becomes the universal dirge:

"Ewig ist das Ganze grün,
Nur das Einzle welkt geschwind."

According to theistic evolution, on the contrary, beginning with the highest and not with the lowest, the spirit of man, being above nature, is not dependent on nature and its processes for its existence, but has in itself the elements of immortality. And when the body dies the spirit lives, forming for itself it may be by its own plastic power a more ethereal medium through which it may act.

The existence of the spirit has sometimes been so taught and defended by theists as to imply that every living creature is animated by a soul. The doctrine is then open to the objection that, since a single cell has life, every living cell must have a soul. But according to theism rightly understood, the divine power raises matter to various orders of being, without lifting it out of the fixed course of nature. It is in man alone of terrestrial beings that rational, personal spirit appears. This is the necessary result if the evolution starts with the highest in God. The other conception of a soul in every living thing comes from thinking which has not entirely cleared itself of the materialistic conception that the evolution begins with the lowest.

What the spirit of man may become in the course of endless evolution the human mind cannot conceive. What new and higher orders of being may be brought into existence, what new heavens and new earth may appear, in what new and more ethereal forms matter may be conditioned, there is no limit to our conjectures. There is nothing unreasonable in the fancy of Prof. Le Conte that material forces may be gradually exhausted and be replaced by spiritual; nor in the fancy of the authors of the "Unseen Universe" that the available energy of the visible universe will ultimately be appropriated by the invisible, and the universe of gross matter will disappear. We have at least certainty that the manifestation of the Absolute in the finite is forever progressive.

It only remains to notice a common error in discussing evolution; I mean the assumption that the evolution of our own system is the all-comprehending evolution of the universe. When it is traced from its beginning in the homogeneous to its end in lifeless and motionless equilibrium, it is treated as if it were the entire history of the universe. As men formerly constructed theories of theology and cosmogony as if the earth was all, now with equal simplicity they construct theologies and cosmogonies, as if the evolution of our own system was all. But an

evolution like that of our solar system has gone on, we may suppose, in the formation of every star. Nebulæ are observed, supposed to be now in the process of evolution into worlds; and the matter already evolved into our solar system or into any other, may be supposed previously to have passed through many evolutions. There may be what Spencer calls a "rhythmic movement," not only within a single system in evolving, but in the progress of the universe as a whole through myriads of evolutions. So that, as formerly in our theologies and cosmogonies we thought and discoursed of planets and suns, now we must think and discourse of evolutions, and of systems in various stages of their evolution. The universe as known to us is probably but an infinitesimal part of the universe as it is, and as it has been. The removal of this single misapprehension silences the anti-theistic arguments founded on evolution.

10. The action of God in creating, sustaining, and evolving the finite universe is uniform and continuous according to law.

The common objections to theism are, that the supposition of supreme will introduces an element of arbitrariness or caprice into the universe incompatible with the uniformity of nature and the universal reign of law; and that the evolution of finite free wills is an increase of the force in the universe, and so incompatible with the order of nature. But it is now obvious that these objections rest on a gross misunderstanding of theism.

In the first place, when it is argued that order and law in nature prove the absence of will and thus disprove theism, the objector regards God simply as an almighty will unregulated by law, that is, an almighty caprice or *ὕβρις*, which Sophocles says is the parent of tyranny. God is not capricious will, but absolute Reason; his will is eternally in harmony with Reason, and all his action regulated in wisdom and love. Thus through all time he is progressively realizing the archetypal plan of his wisdom and love which is itself the constitution of the universe.

In the second place, God works on and through the world as already existing. When, as in the beginning of life, a new power appears, its appearance is not arbitrary or irregular, but it appears then and there because the matter in its evolution had reached a condition in which it was receptive of the divine energy and capable of revealing the new power. And this new power at its appearance becomes itself a part of the world through which God acts, revealing still higher agencies. Accordingly material things being definite powers fixed in the limits of time and space, must always act according to the constitution of their own being. Or if they are regarded as vehicles or media for conveying force, that also must be accordant with their constitution. This is the common axiom of physical science, that everything must act according to the law of its own being.

In the next place, the evolution of new powers, even of free moral agents, adds nothing to the sum total of energy ; just as the appearance of a new physical force is supposed to add nothing to the sum total of force in the material world. So here the appearance of the new power only reveals power always potential in the Absolute Being. Giving does not impoverish the Absolute One. The objection that the existence of finite free-agents implies an increase of force in the universe, arises either from the error that the absolute is merely the sum total of finite things, or from the materialistic monism that nothing exists but a definite quantity of matter and force. Into some error of this sort Dr. Caird falls when he tells us that if we think of all power as potential in God and not revealed in the universe, we must think of God as being less than he is now.* The same reasoning would prove that the continuous evolution of the universe would make God continuously greater than he had been. When man appeared, for example, God would be greater than before. The theistic conception of God excludes this objection, as I have already shown. It has also been replied that a finite free-will is merely a directive power. It is a principle of mechanics that a force acting at right angles to the line of a moving body does no work, adds no new energy ; it merely deflects an energy already in action. So it is said a finite free-will merely directs energies already existing from one line of action to another. This may be so. But it is unnecessary to the theist's position to maintain that it is so.

The objection is further urged that free-agents by their free action may interrupt the course of nature. Milton represents the good and bad angels as hurling the mountains on each other in their warfare ; and why may not mighty evil spirits push the earth from its orbit, or hurl satellites and asteroids against each other as an angry mob hurl stones ? I answer, first, that science has made us familiar with the idea of the collision and destruction of worlds ; and it is not theists but astronomers who at the appearance of every comet revive the old terror in a new form by predicting its collision with the earth. With the views of Prof. Clifford as to the inexactness of physical movements and the common denial that final causes and any rational end or plan can be discovered in the universe, we seem to be approaching to a scientific revival of the idea that all things happen by chance, which as unregulated force is in its ultimate significance not distinguishable from necessity or fate. Theism, in common with physical science, teaches that as this earth had a beginning in its present form, so also it will come to an end. It also teaches in common with science that this end

* *Philosophy of Religion*, p. 254.

will come only in accordance with natural law and not by unregulated force whether called fate, necessity or caprice. According to theism the constitution of the universe rests on truths, laws, ideals and ends eternal in the divine Reason, and no power, not even the Almighty, can annul or change them, or effect results in contradiction to them; the laws of nature, which to us appear only as uniform sequences, are seen by God to be founded in these eternal and unchangeable truths; and the archetypal plan of the universe eternal in the mind of God is the plan of perfect wisdom and love expressing the same. All will-power is invincibly circumscribed within these bulwarks of Reason and cannot destroy nor alter nor overleap them. The order and law of the universe are also guaranteed by God's love. While materialistic science denies all final causes and all plan for the realizing of moral and rational ends in nature, theism teaches that God subordinates the physical world to the realization of moral and spiritual ends in a plan determined in absolute wisdom and love. That plan he guards with all the energy of almighty power and all the interest of perfect love, and suffers no finite agent to frustrate or mar it. If wicked beings attempt it, they waste their strength in contending against the very constitution of the universe and meet a power above them which frustrates their plans, restrains their power, and with unerring justice brings on them inevitable retribution. He endows beings with reason and free-will that they may know him, may be objects of his love, and constitute under his government and grace a moral system in which may be realized the highest rational ends and the good which reason approves as worthy of God and of all rational beings. He gives them the scope for action necessary that they may have opportunity to choose between right and wrong, good and evil, and form by their own free action characters which shall make them like God, capable of entering into his plans, working with him in their realization, and attaining and enjoying the good which has worth that is above all price and endures in the life everlasting. He comes to them with all the influences which infinite wisdom and love can suggest, in nature and providence, in law and gospel, in righteous government and redeeming grace, to deter them from sin or to recall them from it to repentance. If they resist these influences and persist in sin, if they prove themselves impervious to God's love and incorrigible under all his saving agencies, then God will not prevent the evil which they bring on themselves; for under the constitution of the universe sin is itself the essential evil; a life of selfishness cannot bring blessedness to the sinner, but evil and only evil continually. And in ways known to himself God will restrain their power to do evil and frustrate their plans. Whatever their efforts the powers of wickedness can never unsettle the courses of nature fixed

in his eternal reason, nor stop the efflux of his love into the finite, nor becloud the light of his wisdom, nor hinder the progress of the reign of righteousness and good-will to which all the system of nature is subordinate. God meets their wrong-doing with his right-doing; and however the action of the wicked may modify the temporary course of events within their limited sphere, God's action on occasion of those events will reveal new aspects of his perfection and new resources in the riches of his grace for the advancement of his rational and spiritual plan.

Thus we see that all God's action is continuous according to law. There is nothing arbitrary in the divine will. It is eternally in harmony with the divine reason. Dr. Caird says: "The existence of a finite world or of finite spiritual beings cannot be ascribed to a mere arbitrary creative will, but springs out of something in the very nature of God; the idea of God contains in itself, as a necessary element of it, the existence of finite spirits."* This is certainly groping in darkness when there is light enough to see. God is not "nature" at all; he is spirit. It only confuses us to attempt to explain the uniformity of his action as a uniformity of nature, as we explain the uniform action of a material thing. The absence of arbitrariness and caprice in God and the complete uniformity of his action arises not from his "nature," but from the eternal harmony of his will with his reason. This is the fundamental basis of uniformity or continuity of action in accordance with law. It is the perfection of God's character; the perfection of his wisdom and love. The action of his will continuously expresses the eternal truths, and accords with the eternal laws of Reason, and thus realizes all rational perfection and all rational good. This is the meaning of the words of Scripture "God is love." The accordance of his action with reason is not the deliberating, hesitating, varying action of a man not knowing always what is wise and right and not doing it always when he knows; but it is the continuous action of an eternally characterized will, analogous at an infinite remove to the uniformity with which an honest man pays his debts, or a saint in heaven does right. The uniformity of the course of nature is fixed in the absolute, never changing wisdom and love of God.

✓ 11. The existence of finite persons inhabiting the physical cosmos under the moral government of God, the Supreme Reason, constitutes a moral system. This opens a sphere of endless progress realizing spiritual perfection and the good which is approved by reason as worthy of God. The materialistic evolution of any conceivable system must

* Philosophy of Religion, pp. 251, 252.

have a beginning and an end in time and definite limits in space. Its energy is dissipated or equilibrated, till the whole movement stops in inaction; and the mass remains lifeless and motionless unless power from without itself is communicated and resolves it back to its original condition. Materialism precludes such a power. But even if we suppose, with the materialist, an endless rhythm of the development, equilibration and disintegration of matter, it presents no object worthy the eternal action of the energies of God. It does not reveal the wisdom and love of the All-perfect and absolute One. But when we conceive of each system in every successive one of its ages-long rhythmic movements evolving innumerable personal beings capable of knowing God and acting like him in wisdom and love forever, when we conceive of these multitudes guiding to beneficent results the forces of the worlds in which they live, bringing the resources of those worlds into use and enriching and adorning them with fruitfulness and beauty, when we conceive of these personal beings developing a higher organization and passing into higher and ever higher conditions of being, and followed by trooping millions continually succeeding and following them in their path of development, when we conceive of the physical systems themselves in successive evolutions brought to higher conditions, as the Scriptures shadow forth in the new heavens and the earth, and inhabited by powerful, and wise and living spirits with spiritual bodies, when we conceive of the spiritual civilizations, educations and commonwealths which will exist in peace and blessedness, and when we conceive of the innumerable systems in various stages of this development simultaneous in space, and innumerable systems thus developing successively through endless time, we see an eternally progressive result worthy of God; we get in imagination some glimpse of "what is the breadth and length and height and depth of the love of God which passeth knowledge;" we get some grasp of the significance of the words, "God is Love." The material universe, with all its grandeurs, but gives the ground on which rational and moral systems are to stand, the place in which they are to be evolved, the media through which moral and spiritual energies are to be revealed, and the material and instruments which moral beings are to use for the accomplishment of the highest moral and rational ends.

And it is only thus that God can truly reveal himself as Supreme Reason or Absolute Spirit. If God were an impersonal being he might adequately reveal himself in an impersonal or material universe. Or rather God would not reveal himself at all, for the impersonal finite universe would be the all, with no absolute and infinite being to be revealed, and no finite mind to receive the revelation. Because God is Reason or Spirit, he can reveal what he is as spirit only in finite beings who

are reason or spirit like himself. Man is a personal being. In himself and in personal beings like himself he knows what reason and free-will and rational motives and ends are; he knows in a word what a person or spirit is. Thus God reveals to him what he himself is as person or spirit. Through man and all personal beings, God also reveals his love, his righteousness, his benevolence, his moral perfection; for if no personal beings existed, there would be no beings who could be the objects of his love or subjects of his moral law and government. Man, as a personal being, is the organ for the deepest and truest revelations of God.

Man, as individuated, has being distinct from God. Like the physical creation, man is always dependent on God for his existence. But man is related to God, also, by the moral law. He is under God's moral government. In this relation he can put himself in direct antagonism to God by disobeying the moral law which is the law of reason. He comes into oneness with God only as, trusting God, he consents to the law and so participates in God's universal love. God who is immanently active in nature, is also immanently active in the moral system by the Holy Spirit, sustaining, enjoining and commending the law of love, and in all action compatible with free agency influencing all his rational creatures to obey it. The deepest unity of the universe is not of substance, nor of efficient cause, but the unity of a rational and moral system in love.

12. Mr. Spencer objects that conceptions like the foregoing imply in "the Originating Mind" a series of states of consciousness and a distinct volition to effect every motion in nature. "Even to a small set of these multitudinous terrestrial changes, I cannot think as antecedent a series of states of consciousness; cannot, for instance, think of it as causing the hundreds of thousands of breakers that are at this instant curling over the shores of England."* Another asks whether a tiger devouring a deer is a thought of God devouring another thought of God. It is also asked whether God by his direct volitions combines and moves those physical agencies which rack the human frame with torture, which spread pestilence and famine, or which desolate human homes in tornadoes, floods, earthquakes and fire.

Some theistic explanations of God's action in nature give occasion for these and similar questions and objections. Dr. Samuel Clarke says: "All these things which we commonly say are the effects of the natural powers of matter and laws of motion, of gravitation, attraction, or the like, are indeed, if we speak strictly and properly, the effect of God's acting upon matter continually and every moment, either immediately

* Review of Martineau.

by himself or mediately by some created intelligent being. Consequently there is no such thing as what we commonly call the course of nature or the power of nature. The course of nature is nothing else but the will of God producing certain effects in a continued, regular, constant and uniform manner; which course of acting, being in every moment perfectly arbitrary, is as easy to be altered at any time as to be preserved." Dr. Caird and Mr. Mulford have attempted to found Christian Theism on the Hegelian philosophy. But they have not succeeded in eliminating the pantheistic virus, and they, as well as Dr. Clarke, leave their statement of theism open to objections like those mentioned. Christian theism, however, in shunning the mechanical theory which, with Robert Boyle, likens the universe to a clock wound up and left to itself, does not substitute for it another clock whose machinery the maker must continually move with his finger. In getting rid of the artificer it does not bring in the unskilled laborer painfully effecting every movement by hand. Theism recognizes the real being and efficiency of second causes. And because the plan and purpose of God's eternal wisdom and love must be realized in and through finite beings, the realization is progressive and at every point of time incomplete.

To this Dr. Caird objects that the absolute being is himself the creator of the finite universe and therefore is himself responsible for the untractableness of the material on and through which he works.* This objection supposes mere Almightyness to be supreme in the universe, and that in its most terrific form of arbitrary will unregulated by law; that is an Almighty Caprice. Dr. Clarke explicitly avows this conception: "action in every moment perfectly arbitrary," "as easy to be altered at any time as to be preserved." This has been a not uncommon misapprehension of God and has given opportunity to objections. But this is not theism; least of all is it Christian Theism. Christian Theism recognizes Reason as supreme in the universe; and all its energizing is the energizing of reason; all its power is in harmony with the truths and laws and ideals and ends of reason—truths, laws, ideals and worth eternal and unchangeable. This is the exclusion of all caprice, the subjection of Almighty power itself, as Will, in its own free and eternal choice, to Reason and its truth and law. God's thought is the archetypal, unchanging and all-comprehending thought of Absolute Reason, and his purpose the all-comprehending purpose of Almighty will in harmony with reason; it is the purpose of perfect wisdom and love. But the realization of that plan and purpose in finite creations is slow and progressive, and the hindrances to its immediate and complete realization are not of God's own making. For, first, God's almighty power is hemmed in by the truths

* *Philosophy of Religion*, p. 144.

and laws, eternal in himself the Absolute Reason, which no power can annul and so make the absurd and the contradictory to be real. Secondly, his will is eternally in harmony with reason and his action is limited within the lines of absolute wisdom and love. In the third place, the distinction between the infinite and the finite is not created by any fiat of God's will but is eternal in absolute reason; and if God is to have creatures whom he can bless and a world in which they can live and be blessed by him, he must create them by his own power as finite creatures, limited by dependence on the power that made them, and limited in time, place and quantity. And, lastly, when they are made, he must respect their rights, and act on them according to what they are, whether free or not free, whether personal or impersonal. He can cause in them and through them, only effects commensurate with their capacity. He emits of his fulness in the inexhaustibleness of his power, wisdom and love; but the creatures can receive of his fulness only what they have capacity for. If he would make higher manifestations of his plenitude in and through them, he must first develop them to a greater receptivity and power.

Thus all objections founded on the limitation of good and the liability to evil which are inseparable from finiteness have no force. If a starfish were conscious of its inferiority and should complain that it is not a squirrel, the squirrel might complain that it is not a horse, the horse that it is not a man, the man that he is not an angel, the angel that he is not an archangel, the archangel that he is not God. If a man complains that life is so short, he might equally complain if life were a thousand years; and, when knowing his immortality, he might equally complain that he had not been brought into being millions of years before. Equally groundless and for the same reason are all objections founded on liability to suffering, for this also is inherent in the finiteness of living creatures. A physical organism susceptible of sensible pleasure must be susceptible of pain; the demand for a world exempt from liability to pain would be a demand for an insensate world. And the evil to which beings are liable as well as the good which they may enjoy increases with the increase of endowments; the responsibility and the moral risks are proportioned to the powers. A stone cannot die, a tree cannot suffer, a brute cannot sin. All objections of this sort in their ultimate significance are demands that the finite should be infinite, that the creature should be God; they mean that it is not right for God to create unless he create God. We see, therefore, that God does not create the necessity of the distinction between the infinite and the finite, nor the necessity, if he creates, that the universe as created be finite; and we see that he is not responsible for the limitations of the finite. The necessity of this distinction is eternal in the absolute reason and

the annulling of it is absurd and to all power impossible. And even with our short sight we can see reasons enough why God should create the universe with its natural and moral systems, even though with the limitation of good and the liability to suffering which are inseparable from finiteness. And this is the lesson of the narrative of the Canaanitish woman who said, "Yea, Lord; for even the dogs eat of the crumbs which fall from their master's table;" we are not to murmur against God for the limitations of constitution and condition which in wisdom and love he has appointed; but thankfully to accept the positive good which he gives, and diligently to use our powers and opportunities to realize the highest possibilities and true perfection of our being.

With all these necessary conceptions the scientific theory of evolution corresponds. It presents the progressive evolution of the universe, just as true philosophy and Christian theism teach that it must be in order to explain the slow but progressive growth of God's kingdom of righteousness and blessedness among men. The law of the kingdom, as Christ declared it, is the law of growth, "first the blade, then the ear, then the full corn in the ear." The same is the all-comprehending law of the evolution of the universe under the government of God. Mr. Spencer's theory that the mind is only a series of states of consciousness is not true of the human mind; much less of the Absolute Reason. Through all successive thoughts and volitions the human mind remains one and the same. It may have a comprehensive plan and purpose which can be realized only in the successive acts of a lifetime. So God remains through all the creations of time the same absolute Reason. His thought and purpose are one and eternal, comprehending all. It does not follow, because finite things which are the expression or manifestation of his thought and purpose are dependent for their existence on him, that he himself is dependent. It does not follow because the manifestation of God's thought and the realization of his purpose must be in finite beings and under the limitation of space, time and quantity, that God himself is a finite being limited in time, space and quantity, and that his thought and purpose are successive in his own eternal being. There is nothing in God's infinitude which prevents the manifestation of his thought and purpose in finite beings under these limitations. If it were so, that very prevention would imply that God is excluded from time and space and thus limited by them; that he is shut up within his own being, incapable of bringing into existence any objects for his love, or any rational or moral system as the sphere for his wise and benevolent action, or any universe giving place and time for rational beings to live and act and develop into greatness, excellence and bliss. Any rigid idea of God's infinitude and unchangeableness, which

involves the impossibility of his acting in time and space and expressing and realizing his eternal thought and purpose in finite beings, implies limitation of the infinite and is necessarily self-contradictory and false. And since finite beings exist and their existence is the occasion of our knowledge of Absolute Being, this rigid idea if accepted necessarily leads to materialistic or pantheistic monism.

The thoughts which have been presented are of value also in answering the general objection founded on the existence of sin. This is not the place for our theodicy in respect to that objection. But a single line of thought, germane to our present discussion, may be presented.

Sin is the essential, and the only essential evil. It is evil in itself and in all its necessary outcome. This evil is actually in the universe; it forces its reality on our notice every day and in all the history of mankind. It came into the universe by the action of finite free-agents transgressing the law of love. It is continued in the world in the same manner. It is essential in the idea of God's moral government over finite free-agents that they be on probation. This is implied in the very fact that they are under God's law of love; that is, they must determine by their own free-will whether or not they will obey the law. In this probation some sin. Their sin is not of necessity but in freedom. They alone are the responsible authors of sin. God is not its author. It is worthy of God to give existence to a moral system in which he is disciplining and educating his rational creatures under the law of love and training their whole characters into conformity with it, so that they shall be in his moral likeness and shall be love as God is love, although under this moral probation and discipline some have sinned. Every act of God is fit for the prevention of sin and for the reclaiming to the life of love those who have sinned. This is the design of the command and the penalty of his law, of all his revelation of his perfections in nature and providence, and in redemption by the humiliation, life, death and heavenly reign of Christ and by the presence of his Holy Spirit among men. In Christ is revealed to us the heart of God seeking sinful men to reclaim them to repentance and the life of faith and love. If it is asked why he does not do more or otherwise than he does to prevent sin, the answer is that he does all that infinite wisdom and love permit or require to prevent his creatures from sinning and to save sinners from their sin. We may also observe that if a person never sins, or if a sinner repents and persists in the life of love, then the whole discipline and education of God's moral government develop and confirm him in the life of love. Then even suffering helps him to realize his perfection and his highest good, and thus becomes itself a relative good. The

Bible intimates that some by persisting in sin will miss all good and live always in evil. But it is not so much that they are shut out of heaven, as that heaven is by their own action shut out of them. The separation of the wicked from the righteous is not first by the command of God, "Depart," but is first by their own choice departing from God and refusing and resisting all redeeming influences and agencies by which he seeks to draw them back. God's word, "Depart," is last and not first; it announces the continuance of that departure from him which they themselves have chosen and have been widening all their lives. This universe is the expression of God's thought; it is grounded in the law of love and constituted according to it. There is no place or time in the universe in which the person who persists in disobedience to that law can realize his well-being. All good men are laborers together with God to prevent sin and to bring sinners back to the life of love. And the power of love must more and more prevail over selfishness. Because sin, which is the only essential evil, originates in the finite, it is itself finite; it cannot have the prevailing power of truth, right, perfection and good, which are of God. God's action is always resisting sin and evil by all agencies consistent with human freedom and prompted by and consistent with his own perfect wisdom and love; but only the action of finite creatures upholds sin and evil. The latter, which has its origin and support only in the finite, cannot prevail over the former, which has its origin and support in God. With this conception evolution is in harmony. The power of God infused into the universe is elevating it in successive stages to higher and higher forms. Prof. Moses Stuart used to say he did not believe the time ever was when God reigned over nothing on earth but bull-frogs. But the reign over bull-frogs has already been followed by the reign over men. And the progress will go on. Always truth, right, perfection, which are originated and sustained by God, must more and more prevail over sin and evil originated and sustained by finite beings.

According to the Christian conception that which is most fundamental in human history is God's continuous action in it redeeming men from sin and developing the kingdom of God in the world. This redemptive action implies in its very essence that the future is always to be better than the past. This promise and hope have been in all ages the heritage of the righteous. It is set forth in the opening of Genesis in God's going after the man and woman, who had sinned and who were fleeing from him, and bringing them back into communion with himself; that is the revelation in the beginning of God redeeming men from sin. The same hope is in the promise to Abraham, renewed to Isaac and to Jacob, that in his seed all the nations of the earth should be blessed;

and the same was set forth with ever increasing clearness by the prophets, illuminating with it the whole history of Israel and awakening those glowing expectations of a better future which have sometimes been called the Hebrew Utopia. This promise and hope were in the glad tidings of great joy brought to all people in the humiliation, the earthly life, sufferings and death of Jesus the Christ, and in his ascension and reign in heaven, and in the descent of the Holy Spirit to abide with us forever. This ancient promise is the heritage of all Christians, of which Paul said, "we, brethren, as Isaac was, are the children of promise." And now physical science, in its theory of evolution, proclaims that a law of progress is in the constitution of the material universe; that in the sphere of unintelligent matter and force, in which of necessity the stronger force must always overpower the weaker, it is necessary that there be continuous evolution from lower to higher and that the future must always be better than the past. Materialism, it is true, injects itself into this theory, annuls the promise and transforms it into a prophecy of despair. It forces the conclusion that the evolution in which the universe has hitherto been progressive, with no power beyond itself to replenish its force, will presently be exhausted of its finite store of force; that it will gradually retrograde into a lifeless, silent, motionless mass and so remain forever. But this annulling of the promise is due to the materialism alone, not to the evolution. Evolution under the theistic conception is to be, with whatever rhythmic movements, a perpetual progress to the higher and the better; nature itself is to be gradually redeemed from its ills and its imperfections; there will be new births of worlds and systems not less than of souls. In its evolution nature has already become fitted for the abode of personal beings knowing God and serving him, has brought forth from its bosom under the power of God a system of rational and moral beings, whose center is not a sun but God, whose unity is not by gravitation and the persistence of force, but by love, and whose law is not that of mere force that the stronger must overpower the weaker, but the contrary law that the stronger must help and serve the weaker, or conversely, that they who in love serve the weak become great and strong: "Whosoever will be great among you, let him be your minister; and whosoever will be chief among you, let him be your servant;" which is the two-sided law of the moral system, Greatness for service; greatness by service. And this opens to us endless progress both in the natural system and in the moral.

On the other hand we must put away an error which often misleads thinkers on this subject—that at some time not very remote in the future the universe is to be perfected and finished, and everything in it to come to its final and unalterable state. Whereas we know certainly that the

universe can never be completed and finished, because the infinite can never be fully and exhaustively revealed in the finite. It must be an everlasting *becoming*. Therefore while we may expect that the higher conditions attained by progress will never be lost, that the universe both nature and spirit will be ever progressive, and that the principles of wisdom and love on which God has acted in the past are those on which he will always act; yet because the universe is progressive it will always be imperfect and incomplete; and doubtless worlds and systems in various stages of progress will always be in it. And in ministering to these in their spiritual education and development, the spirits of just men made perfect may be forever workers together with God; as we are told that the angels now are ministering spirits and rejoice over a sinner who repents.

In this progress it is impossible for philosophy to foresee in what precise way sin and sinners will be disposed of. It is the thought of some that in the lapse of ages and by agencies and influences to us unknown, all men will eventually be reclaimed to the life of love. Their thought is:

"O, yet we trust that somehow good
Will be the final goal of ill,
To pangs of nature, sins of will,
Defects of doubt, and taints of blood.

"Behold we know not any thing.
We can but hope that good shall fall
At last, far off, at last to all,
And every winter change to spring."

In the larger view of the universe which science opens, the same line of thought would lead to the expectation that all races of rational beings, that may come into existence in other worlds, will pass through their moral education and development and eventually attain to the life of love and blessedness. This supposition is most accordant with our natural compassion and the good-will which is an essential element of all love, and with the idea of moral progress analogous to the evolution of nature. On the other hand, when we consider the immutable law of truth and righteousness eternal in God, the freedom of the will, and the absurdity and impossibility of any power, other than the will itself, determining a man's ends and forming his character, and the persistence of character as it becomes confirmed by action, we see philosophical reasons for expecting that some will persist in sin forever. When this line of thought is presented, as it often is, as implying that sin is a process necessary in the moral development of every rational creature, it involves the denial of free moral agency. For if a course of sinning is necessary to

man's moral development and strength, then it is no longer evil but the necessary means of good ; it is no longer a free action but a process of nature, like the necessity of a child's having the measles in order to rid itself of liability to the disease. Then the freedom of the man and his capacity for moral character disappear ; and in what we call sin the man is no longer a sinner and no longer guilty of having caused that which is the essential and the only essential evil in the universe under the righteous and beneficent government of God.

It is the thought of others that the triumph of righteousness will be secured by the annihilation of the incorrigibly wicked. Evolution would teach, under the law of the survival of the fittest, that incorrigible sinners will be crowded out of being. But this law of physical force has no relevancy to the rational system, the progress in which goes on by moral influences and agencies under the law of love. In the evolution of nature the weak are crowded out of existence by the strong. It is more consonant with the moral system, in which the strong help and serve the weak, that they who persist in the isolation of selfishness against all these influences and agencies of love, bring on themselves, not the extinction of being, but a moral perversion and corruption and a moral impotence for good which, as the extinction of all that is noblest and best in character, may fitly be called a spiritual death or death in sin.

The Christian Scriptures teach in the strongest terms the ultimate triumph of the kingdom of God : " Wherefore God highly exalted him and gave unto him the name which is above every name ; that in the name of Jesus every knee should bow, of things in heaven and things on earth, and things under the earth, and that every tongue should confess that Jesus Christ is Lord, to the glory of God the Father." With equal distinctness they seem to teach that the triumph is to be accompanied by a separation of the wicked from the righteous, and a restraint of their power to harm ; while they will have as their heritage the evil which they have chosen as their good ; " they shall eat of the fruit of their own way and be filled with their own devices."

In what precise way the prevalence of right over wrong, of love over selfishness is ultimately to be effected we cannot determine from the analogy of nature or the speculations of philosophy. The Christian will submit the decision to the teachings of Christ and his apostles ; will trust and obey him in the assurance that all who do thus shall go from strength to strength and shall be more than conquerors over all opposing evil ; and will wait for the day when the hidden things will be revealed. Then, whatever be his method of insuring the triumph of truth and right and love, all will see God justified as having done all things in his dealings with men in perfect wisdom and love.

§ 81. Fourth Materialistic Objection to Personality: from the Attributes of Brutes.

A fourth objection to the personality of man is the assertion that man has no attribute differing in kind from those of the brutes; that the difference is only in degree. From this the objector infers that man has no more claim than the brutes to be distinguished from nature as a person, a supernatural being or a spirit. On the one hand it is inferred that, if brutes are impersonal beings, man, having no attributes differing in kind from those of the brutes, must like them be impersonal. On the other hand, it is inferred that if men are persons or spirits, the brutes must be so likewise.

This objection I proceed to answer. It is incumbent, however, on both the objector and the respondent to remember that, because we cannot enter into the consciousness of brutes, there must be some uncertainty in our interpretation of their mental action, and some diffidence and caution are needful in our affirmations as to its nature and significance.

I. So far as we can judge, all the mental qualities and powers manifested in brutes are also manifested in man, and in both are the same in kind. This is admitted in the outset. It excludes much false reasoning founded on the assumption that if brutes have any mental qualities in common with man they are proved to be personal beings like man.

II. In addition to these man has the qualities and powers distinctive of personality, which brutes have not.

1. These distinctive qualities of man are clearly and decisively marked in each department of mind: in the intellect, the sensibilities and the will.

In the sphere of intelligence brutes have capacities in common with man, such as sense, memory and probably thought in some of its simpler forms. In addition to these man is endowed with intuitive reason: he knows self-evident and universal principles; attains the rational ideas of the True, the Right, the Perfect, the Good rationally estimated as having worth, and the Absolute; and is capable of empirical, philosophical and theological science. Even in the sphere of perceptive intuition man has power which the brute has not. In all his mental activity man is conscious of himself as persisting in unity and identity, one and the same subject of all mental acts. In sense-perception man's mind reacts on the objects of sensation as an active percipient, while sense in the brute, as we suppose, is merely receptive of impressions. Man's knowledge is ontological in its beginning. Man, also, has a power of generalization and reflective thought which exists in brutes only in its simplest forms, if at all.

In the sphere of the sensibilities brutes are susceptible of motives and emotions the same as are found in man, such as the appetites, the desire of society, emulation, compassion, parental affection, and other natural affections and desires. In addition to these man is susceptible of rational motives and emotions, scientific, moral, æsthetic, religious, and of all motives and emotions arising from the idea of worth as estimated by reason.

In the sphere of will, brutes, like men, have the power of locomotion and power to follow their instincts and desires, to "do as they please." But their action simply follows the impulse which at the time is the strongest. Man has also free-will, the power of determining in the light of reason the ends to which he will direct his energy and of exerting his energy or calling it into action at will.

That man is thus endowed has been proved at length in preceding chapters.

2. Brutes lack these distinctive qualities and powers of personality.

I cannot go into a full investigation of this question. I only indicate some points which, so far as I have studied the subject, seem to be true and decisive.

First, many facts alleged to prove that the mental powers of brutes are the same with those of men, pertain to those lower powers which are admitted to be common to brutes with man. In the discussion of the subject the real line of demarkation between the personal and the impersonal is often overlooked. We are concerned only with facts purporting to reveal in brutes the attributes distinctive of personality.

Secondly, the facts adduced to prove that the distinctive qualities and powers of personality exist in brutes, fail to prove it. To justify this conclusion would require a critical examination of a multitude of alleged facts, impossible within the limits of this discussion. I merely mention a few to exemplify my meaning, all taken from published papers professing to be scientific. A dog which accompanied its master several days in succession across a pasture always broke away and ran wildly around a large stump near the path; and this is cited as an example of fetich worship in the dog. Darwin mentions a dog whose behaviour in presence of a newspaper moved by the wind seemed to indicate a "sense of the supernatural." A little dog accustomed to play with a rubber ball, being left alone, was found, when some one entered, erect on a table holding out its forepaws to the ball lying on the mantel beyond the dog's reach. It was claimed that the dog was praying to the ball to come down. It is needless to say that the religiousness indicated in facts like these exists only in the fancy of the observer. Many facts urged as decisive evidence of morality or even of

religion in brutes indicate merely natural or instinctive affections. The sympathy and compassion of brutes is claimed as "the divinest thing in man." But sympathy and pity are affections of nature arising involuntarily in the presence of suffering and do not constitute moral character in its primary and distinctive meaning. It is claimed that a dog lying persistently on its master's grave till it dies reveals self-sacrificing love, which is the highest virtue. On the contrary, it reveals simply an uncontrolled and irrational natural affection, not a rational love enduring suffering for the good of another or in the intelligent doing of duty. It certainly does not indicate reason. If a human being should do so, we should think the action unreasonable and even a sign of insanity. For a person to die of grief is not evidence of moral self-control, nor of the supremacy in the life of self-sacrificing love to God and man. We are told of "the ant and the bee, *who* have risen, if not to the virtue of all-embracing charity, at least to the virtues of self-sacrifice and of patriotism;" . . . "the fact that the great majority of workers among the social insects are barren females or nuns, devoting themselves to the care of other individuals' offspring by an act of sacrifice, and that by means of that self-sacrifice these communities grow large and prosperous." I cannot think that this writer or any other sensible person, after reflecting on this assertion, can suppose that the working bees have the slightest consciousness that there is any condition of life, better than their own, which they are deprived of, or of any act or purpose of their own renouncing that happier life and consecrating themselves to the service of the community. They act from pure instinct; they do what their nature impels them to do, without consciousness of any other possibility. It cannot be supposed that these creatures have deliberately chosen to set aside all which is most pleasant to bees and which themselves are conscious they should enjoy, and to devote themselves to a life of labor and privation in order to promote the prosperity of the community. It is not supposable that they ever had the idea of the community and its prosperity, any more than the coral zoophytes have of the Neptune's cup which they are all building in unison. Moral character lies primarily in the intelligent choice of the end of action, and the determination of the energies to do it, resisting and controlling all contrary impulses of nature in subordination to the chosen end; it does not lie in instinctive impulses. A lamb is gentle, a tiger ferocious by nature; the ferocity of the one and the amiableness of the other have no more moral character than the offensiveness of the hyoscyamus and the sweetness of the rose.

Many facts are adduced as proving moral ideas and character in brutes which prove only subjection to superior skill and power, and fear of inflicted pain. A horse exerting itself till it falls exhausted is said

"to show an honest and self-sacrificing devotion to its notion of duty." Once when I was with a distinguished sportsman in the vicinity of Moosehead lake a dog joined us and came at once to heel. The sportsman remarked, "That dog has had many a beating." He knew that it is thus a dog is educated and trained. The same is exemplified in the methods of training wild elephants. An obedience thus springing from subjection to superior power and the dread of inflicted suffering is no proof that brutes have any idea of moral law, or of the distinction between right and wrong, or of the sense of duty or obligation. Alleged facts supposed to indicate remorse, if ascertained to be facts and not mere unauthenticated "dog-stories," may be explained in the same way. An anonymous writer in the *London Spectator* relates that a young fox-terrier, which had often been punished for taking a handsomely carved brush from the table and playing with it, after having been left alone in the room, was asked by its master on his return, "Have you been a good little dog?" whereupon the dog put its tail between its legs and slunk off and brought the brush from where it had hidden it. On another occasion when asked the same question, it walked off slowly, with the same look of shame, and lay down with its nose pointing to a letter bitten and torn into shreds. The writer says: "I was much struck with what appeared to me a remarkable instance of a dog possessing conscience." But it proves nothing more than a sense of having displeased its master and a dread of punishment. Lamettrie evades the difficulty by suggesting that morality in man is at bottom nothing but fear of punishment. He thus reduces man to the level of the beast instead of lifting the beast to the level of man.

It is claimed that birds and beasts appreciate beauty of form, color and song, and that this is an important factor in natural selection. But this is all fancy. The song-bird that "warbles its native wood-notes wild" does not please itself and its mate any more than the Guinea-fowl does by its incessant creaking note, or the cat by its caterwauling. The spreading of the wing and other acts and cries fancied to be a display of beauty to the æsthetic eye of the mate are better explained as merely the expression of animal excitement, like the singing of Chaucer's "January."

It is also claimed that some brutes show in their actions that they possess the higher or intuitive reason; particularly that their action accords with mathematical truths and the laws of mechanics. It has been said that "the brain of the ant is the most wonderful little morsel of matter in existence." The honey-making ants of Texas and New Mexico are said to build their ant-heaps in an exact square four to five feet on a side, the four sides fronting exactly North, East, South and West. Bees are said to conform their cells to a geometrical figure and

thus obtain the maximum of room with the minimum of material. The fish-hawk soaring high in the air in order not to frighten the fish before he pounces on it, acts in striking it as if he had measured its distance and direction, and ascertained the refraction of light passing at different angles from the air into the water. A little fish, the *Chatodon rostratus*, shoots a drop of water through its prolonged snout at an insect flying near the water and brings it down within its reach, as unerringly as if it had calculated exactly how far from the apparent place of the insect it must aim, on account of refraction, in order to hit it. But if facts like these are urged to prove the higher reason in brutes, they prove too much. If they prove anything in that direction, it is that the fish, the bird and the bee, before every act of the kind, must solve a complicated problem of the higher mathematics. And since in the case of the fish and the hawk the conditions of the problem vary in every act, not only must the problem be solved, but the distances and the angles of incidence, and the degree of refraction must previously be measured. This is not supposable. We can only attribute the action to instinct. Accordingly we find that these animals do not depend on education. The young one is as skillful as the old. Nature acts in them as unerringly as in the planets. But man, endowed with reason and free-will, begins with less skill than the brutes; he learns, he makes mistakes, he educates himself, he surpasses himself every year. In the brute nature rules and the will is no more than the impulse of nature. In man reason guides, the will chooses and determines, and man within the sphere of his determination, controls nature. It must be added that a brute is no more capable of the simplest mathematical calculation than of the most complex. A cat misses one of her five kittens which has been taken away, not through the arithmetical reasoning, $5-1=4$, but by sense; as one at a glance without counting misses an article of bric-a-brac removed from a familiar shelf. Brutes may perhaps be capable of reasoning in some of its simplest forms. A man gave half an orange to his orang-utan and hid the other half on the top of a high press. He then lay down and pretended to go to sleep. The creature presently approached him cautiously and being apparently convinced that he was asleep climbed up and ate the remainder of the orange and hid the peel among some shavings in the grate. He then examined the pretending sleeper again, and lay down on his own bed.* This seems to imply reasoning; and it may be argued that it involves a recognition of intuitive principles of reason which are laws of thought. But since animals of the lower orders, even so low as the coral zoophytes, do what, if done by man, would imply reasoning and solving complicated

*Tylor: Anthropology; p. 50.

mathematical problems and the concerted action of multitudes in accordance with a complex and far reaching plan, and since these acts must be referred to instinct, there is room for a similar explanation of acts like that of the orang-utan, in which if there was reasoning it was far simpler. Such acts may probably be explained by the association of one remembered perception with another, or some simple process of thought not implying the knowledge of universal principles like those on which mathematical and other scientific reasoning rests. The female larva of the stag-beetle, about to become a chrysalis, makes a hole of just its own size. The male makes double his own length because he will have horns as long as his body. Perfect insects in laying their eggs make provision for the food of the larva which is to be hatched. No one can suppose this is done by reasoning founded on the insect's remembrance of its own needs in the larva state and foresight of the needs of the coming larva. Why then may not simpler processes be explained by instinct?

A third point to be noticed is, that the argument to prove that man has no powers differing in kind from the brutes, rests on anthropomorphic conceptions of brute life. It attributes to brutes thoughts and feelings the same as man would have in the same circumstances. It interprets into the life of the brute what exists only in the consciousness of man. This fault is conspicuous in Darwin's discussion of natural selection.

The objection against personality that man has no powers differing in kind from those of brutes is grounded, as we see from the foregoing discussion, on errors of two kinds. On the one hand, the objector fails to distinguish the attributes of personality peculiar to man from conscious feeling, volition and intelligence of a lower order, common to man with the brutes. Because all the mental powers of brutes are found also in man, the objector jumps to the inference that all the mental powers of man are found also in the brutes. Besides this, through not definitely apprehending what the attributes of personality are, the objector urges as indicating morality, religion, æsthetic emotion or reason in brutes, actions which manifest only mental powers of a lower grade; for example, that a dog fawning on its master manifests religion. A story was told many years ago of two dilettanti of Boston seeing Fanny Elslar dance, that the man enraptured turned and exclaimed, "Margaret, this is poetry!" But she replied, "No, Ralph, this is religion!" It only needs an exact and correct definition of religion, or of the other attributes of personality to demonstrate the inappropriateness of many of the facts cited in support of the objection and the inconclusiveness of the reasoning from them.

On the other hand, the objection is grounded in biological anthro-

pomorphism, which interprets into the acts of brutes, thoughts, motives, emotions and determinations which exist only in the man who observes them.

3. The higher attainments of men are impossible to brutes.

The first of these attainments is language. Brutes are capable of expressing a present feeling or impulse by gestures, attitudes, cries and other natural signs. In this way they hold communication with one another. But this is not language. Language, in its proper significance, is the expression of general notions by symbols. It presupposes the power of abstraction and generalization. The symbols may be words spoken or written or, as with deaf mutes, signs made with the fingers or other bodily organs. But in each case the utterance transcends the natural signs by which feeling is spontaneously expressed, and is made by symbols fixed by thought and expressive of general notions formed by thought. Some brutes can articulate words; they have voice but not language. No brute has ever been known to attain to the utterance of a single word of language in its full and proper meaning. This implies incapacity to abstract and generalize. All feeling carries in it a certain indefinite element of intelligence. The intelligence of brutes remains mostly swaddled in the sensations and feelings. Says Lewes: "Between the extremes of human intelligence—say a Tasmanian and a Shakespeare—there are infinitesimal gradations, enabling us to follow the development of the one into the other without the introduction of any essentially new factor. But between animal and human intelligence there is a gap which can only be bridged over by an addition from without. That bridge is the language of symbols, at once the cause and the effect of civilization. The absurdity of supposing that any ape could under any normal circumstances construct a scientific theory, analyze a fact into its component factors, frame to himself a picture of the life led by his ancestors, or consciously regulate his conduct with a view to the welfare of remote descendants, is so glaring, that we need not wonder at profoundly meditative minds having been led to reject with scorn the hypothesis which seeks for an explanation of human intelligence in the functions of the bodily organism common to man and animals, and having had recourse to the hypothesis of a spiritual agent superadded to the organism."*

A brute does not change his voice. An ass's colt suckled by a mare and brought up among horses never loses its bray, nor learns to neigh like a horse. A child of whatever race speaks the language of those among whom it is brought up.

* Problems of Life and Mind. First Series. Vol. I., 144, §§ 52, 53.

A second attainment, impossible to brutes, is the use of tools. Wherever an implement is found, if only a stone ever so roughly chipped, we infer at once that it was made and used by man. This is not because the brutes do not have hands; for apes, which have hands, do not use tools. If it is a fact that an ape, untaught by man, ever uses a stone to crack a nut, yet it is still a fact that an ape never shapes a stone or a stick, nor ties a stone to a stick to fit it for use as a tool.

A third attainment never made by brutes is the use of fire. They enjoy the warmth of the fire kindled by man but they cannot preserve much less kindle it. Mr. Lubbock says that some races of men have been found who knew nothing about fire.* This may be doubted. Traces of fire are found in the earliest pile-dwellings and in the Danish shell-mounds. In the caves where the remains of the earliest men have been found, charcoal and burnt bones have been discovered with the bones of the mammoth and the cave-bear. At Aurignac, in the Pyrenees, not only coal and ashes were found, but also fragments of fissile sandstone reddened by heat which must have formed a hearth.† In the earliest periods "the rude cave-men made fires to cook their food and warm themselves by." Mr. Tylor says: "No savage tribe seems really to have been found so low as to be without fire."‡ If man ever existed without fire, he had discovered it at the earliest period to which his existence can be traced, has preserved it ever since and made the most wonderful applications of it in supplying his wants and advancing his civilization. The contrast with the utter helplessness of the most intelligent brutes in this respect is very striking.

Man also is capable of progress both as an individual and in society. Brutes improve only by natural selection or by man's agency in domestication. They are incapable of progress by self-education and the transmission of their discoveries and inventions to posterity.

The difference between the lowest savage and the highest brute is immeasurably greater than that between the lowest savage and the most highly endowed of civilized men. Laura Bridgman, blind, deaf and dumb from infancy, and with scarcely any sense of taste and smell, can now write a good letter, maintain an intelligent conversation by signs, and do various kinds of work; she has also high moral and religious culture. No teaching and training of the most intelligent brute can approximate to such education and culture, or even make the least beginning of them. Lamettrie became deeply interested in

* Prehistoric Times, p. 453.

† Lyell: Antiquity of Man, pp. 181-193.

‡ Anthropology, p. 260.

a then recently invented method of educating the deaf and dumb. He compared apes to deaf mutes, and expressed a desire for a large and clever ape to educate by the new method. Had he tried the experiment it would have been instructive to contrast his failure with the education of Laura Bridgman. Dr. Maudsley says: "However low a human being may fall, he never reverts to the type of an animal; the fallen majesty of mankind being manifest in the worst wrecks. Certainly there may be sometimes a general resemblance to one of the lower animals, but the resemblance is never anything more than a general and superficial one; all the special differences in mental manifestations are still more or less apparent, just as the special differences in anatomical structure still remain. The idiot with hairy back may go on his knees and 'baa' like a sheep, as did one of which Pinel tells, but as he does not get the wool and conformation of the sheep, so he does not get its psychical characters; he is not adapted for the relations of the sheep, and if placed in them would surely perish; and he does exhibit unconscious traces of his adaptation to his relations as a human being which the best developed animal never would. So also with regard to man's next of kin, the monkeys; no possible arrest of development, no degradation of human nature through generations, will bring him to the special type of the monkey."*

Man has also the capacity of falling by sin, which the brute has not. By the minding of the flesh instead of the minding of the spirit, he perverts, abases and corrupts himself, and fails of all the true ends of his being. No brute is capable of this. Prof. Tayler Lewis published an article maintaining that the highest power in man, by which he is completely distinguished from the brute, is his power to "fall" from his normal condition by his own action. The Duke of Argyll, in his essays on "The Unity of Nature," advances the same thought. There seems to be much force in the argument. In brutes we do not discover a common disposition to actions contrary to their constitution and tending to weaken and destroy not only the individual but the race. In them the evolution passes through all its stages with perfect accuracy to the end, the propensities developed in it are in harmony with their powers, and these in their functions are in harmony with the constitution of things. This must be so, according to the theory of evolution, because the theory assumes that the need of a function leads to the evolution of its organ, and the organ acts to supply the need. In man alone we find a persistent tendency to action which leads to the vitiation and even the destruction instead of the perfection of his being and his race; action in disharmony with himself

* Physiology and Pathology of the Mind, p. 290.

and with his highest functions in the world, and with his own consciousness of duty to obey what he knows is the supreme law of his being. A very large part of mankind, embracing nearly all savage tribes and multitudes of civilized men, exhibit dispositions, habits and actions which, as tending to corrupt, weaken and destroy the race, are unnatural and monstrous. They enslave and maltreat their females, murder their children, kill and eat one another. So that, as the Duke of Argyll intimates, there is a certain literal truth in the comparison of man with the dragons:

“Dragons of the prime,
That tear each other in their slime,
Were mellow music matched with him.”

The most horrible and loathsome brutes show no tendency to action contrary to their own nature and destructive of their own species. Here, then, is something exceptional in man, inconsistent with the unity of nature; something which can be explained by free-will, but not by natural evolution and the dominance of the forces of nature through instinct. If man is in his entire being the product of evolution, or of nature-forces only in whatever way acting, then in his lowest stage and onward through all his history he must show the simplicity of brute life and its harmony with itself. His conscious sin and wrong-doing reveal him as a free agent, above nature, transcending its fixed course, using his own free-will in violation of the law of his being, and thus different from the brutes which exist and act only in the fixed and necessary course of nature.

✓ III. If it should be made evident that certain brutes possess the distinctive characteristics of personality, this would prove only that these particular animals are personal beings, having reason, rational sensibility and free-will, subject to the law of God and capable of knowing and serving him. It would not prove that other species of animals were persons. It would not disprove the personality of man. It would enlarge the number of personal beings. The distinction between the personal and the impersonal would remain as sharply defined as ever. It would be pleasanter, certainly, to enlarge the area of personality by finding some animals qualified to be in it, than with Comte to obliterate it altogether and insist that man must give up his claim to be the lowest of the angels and content himself with being the highest of the brutes. If any animals have these distinctive attributes, we cordially welcome them to the fraternity of personal and immortal beings; concurring with the “untutored mind” of “the poor Indian,”

“Who thinks admitted to that equal sky,
His faithful dog shall bear him company.”

IV. By virtue of these distinctive characteristics, man, though implicated in nature through his bodily organization, is in his personality supernatural; the brute is wholly submerged in nature. Man in the use of reason can lift himself above the plane of his own nature, can survey and measure it, and determine his course; he can put himself in opposition to his natural impulses and regulate, develop or subdue them. He is in nature like a ship in the sea, in it, yet above it, guiding his course by observing the heavens even against wind and current. A brute has no such power; it is in nature like a balloon wholly immersed in the air and driven by its currents with no power of steering.

1. To this it may be objected that the sensitivity of the brute cannot be correlated and identified with motion any more than the personality of man can be; that, therefore, if brutes are not supernatural man cannot be; but if man is supernatural then brutes must be so.

The fact alleged in the objection is admitted, but the inference is not justified. The fact that conscious sensitivity cannot be identified with motion does not prove personality either in men or beasts. It simply proves that animated life is more than a mode of motion and cannot be explained by mechanism. It proves the same of personality. But the existence of personal beings is proved by the evidence of the facts of personality known to man in his consciousness of himself and his acquaintance with other men. The line of demarkation between the supernatural and nature does not lie between the living organism and the inorganic, nor between the animate and the inanimate vital organisms, but between the personal and the impersonal. Brutes may have organic life and sensitivity, and yet remain submerged in nature. It is not life and sensitivity which lift men above nature, but it is the distinctive characteristics of personality.

The objection, therefore, avails nothing either in identifying personality with animate life or in identifying either these or inanimate organic life with motion and mechanism.

2. There are three reasons why it is unscientific to affirm that life is merely a mode of motion. One is that no fact of abiogenesis or the origination of organic life has ever been discovered. The second is, it is impossible to identify consciousness or sensitivity with motion, and, it seems to be proved that it is never transformed into motion, nor motion into it. The third is that it involves the incredible doctrine that brutes and men are mere machines or automata. It rests on the materialistic assertion that the universe is a machine and all the processes and powers in it are mechanical. Brutes and men therefore are merely machines. The materialistic scientists of the present day do not avow the old doctrine that brutes are automata, and that a dog's

howling is only the noise of the running machinery. But in affirming that no force exists except the lowest, which is mechanical or motor-force, they leave themselves no explanation of the action of brutes except the mechanical; and mechanical action is the action of a machine. They speak of organic molecules. Inorganic changes they explain by a greater complexity of the molecule; but an organic molecule can be nothing else but a more complex molecule, because they have left themselves nothing but the differing number and relative position of atoms and molecules by which to distinguish the organic molecule from the inorganic. Mr. Huxley, in his lecture on "The Hypothesis that Animals are Automata," calls them *conscious* automata. But a conscious automaton or machine is a self-contradictory phrase. Consciousness is not essential to a machine. A machine is complete without it. If consciousness is added to a machine it is something which is not mechanical. If it is a reality it must be accounted for by some power not mechanical. But by the supposition there is no power except the mechanical force in the universe. Nothing then is accomplished by Mr. Huxley except to affix biological terms to mechanical processes and energies. But to call the parts and processes of a machine by biological names does not annul their character as mechanism, it only disguises it. It has become common in discussing sociology to treat society as a living organism. But according to crude materialism, this social organization itself would be only an automaton called by a biological name.

I have already pointed out some of the difficulties involved in the materialism which begins with the lowest instead of the highest and attempts to explain the universe as the evolution of matter and motor-force. And here, again, the exceedingly complicated and fanciful contrivances resorted to in order to explain observed facts in accordance with this theory remind us of the Ptolemaic astronomers who

"Gird the sphere
With centric and eccentric scribbled o'er,
Cycle and epicycle, orb in orb;"

and when a new discovery was made, were obliged to feign a few more "eccentrics and epicycles, and such engines of orbs," as Lord Bacon calls them, in the already intricate diagram of the heavens. But when the true conception was attained all these complex figures gave place to simplicity. The very fancifulness and complexity of the motions supposed to account for observed facts on the theory that every energy is transformed motion, is a presumption against the truth of the theory and will some day give place to some theory more simple and reasonable.

3. All is explained by the true evolution: absolute being evermore individuating and revealing its inexhaustible potential powers and resources in the limitations and conditions of space and time; and immanently active in the universe by which it is revealed. In whatever form matter is known to us, whether as the gross matter which we see and handle, or the finer stuff which by inference we dimly apprehend, we cannot suppose it to be in its primitive form, but only to have come into that state through we know not what changes. So the evolution goes always on, in the progress of time revealing higher and more varied powers and perfections, and it may be in remote space revealing new worlds and systems, of which already science notes intimations in the dissipation into depths of space beyond our system, we know not whither, of never returning energy. Thus the creative process which in the Absolute is the continuous limitation and individuation of its power, in the finite is its continuous enlargement and evolution. And far beyond this earth, beyond this solar system, beyond this Milky-Way of stars, the world-spirit works, revealing God.

"In the tides of life, in the storms of motion,
I toss up and down,
I weave hither and thither,
Birth and the grave,
An eternal ocean,
A waving and flowing,
A life all-glowing,
Thus work I at the whizzing loom of time,
And weave a living garment for the Deity."

And in view of spheres beyond our imaginings supernatural intelligences may sing,

"And swift and swift beyond conceiving
The splendor of the world goes round,
Day's Eden brightness still relieving
The awful night's intense profound;
The ocean's tides in foam are breaking
Against the rock's deep bases hurled,
And both, the spheric race partaking,
Eternal, swift, are onwards whirled."

There is nothing unreasonable or unscientific in the supposition that in animated organisms there is the manifestation of mechanical force and something more; and yet that the "something more" does not attain to the self-conscious rational freedom distinctive of personality. I have classed as mechanical force, or force in its lowest plane as manifested to us, attraction, repulsion, momentum and the forces known to us as light, heat and electricity. Some scientists hold that attraction

causes motion, others that the momentum of moving corpuscles causes attraction. Each supposition involves apparently insuperable difficulties. It is sufficient to know that these forces seem always to act in connection with matter as perceptible by us, and may be classed together as mechanical. Thence in successive stages the absolute being reveals higher powers as matter is brought into receptivity for them, till personality appears in man; and probably what we call death is the revelation of that same personality in a medium of action and conditions of existence transcending our senses. It is, then, reasonable to suppose that the life of a brute, though its organization has become adequate to be a medium of sensitivity, is not yet capable of revealing personality, and the life remains completely immersed in nature. But when man appears the individuation has reached a point in which he rises above nature though still in it, distinguishes himself from nature, and knows himself as self-directing, self-conditioning, self-exerting and free. Thus in the whole evolution God is the Alpha and the Omega; it comes from God, it reveals God, and at last brings forth beings who rising out of unreasoning nature know God and, distinct from him in being, reunite themselves to him by faith and love in the unity of a moral system.

Physical science, confining itself within its own sphere, rightly notes only facts observed or inferred, and their classification by resemblance and their co-ordination in uniform sequence. But it has no right to declare as a fact of physical science that the universe consists only of matter and mechanical force. It has no concern with the first cause and absolute ground of all that exists. It therefore properly confines itself to what it observes, it treats the forces which come under its observation as resident in or inseparable from nature, without asking how they came to be there and what sustains them in action. Brought at every turn of investigation to confront the fact that there is a power immanently active in the universe transcending all which by its empirical methods it can weigh, or measure, or define, it may assume one supreme, inexhaustible force, everywhere acting, the source of all change, revealing itself in many forms, incapable of absolute increase or diminution. And because this force transcends its empirical methods, it may call it unknowable. But it has no right to say that this unknowable is only mechanical force; it has no right to say that nothing exists but matter and mechanical force, and that the universe is merely a machine. Because in so doing it sets aside facts empirically known, that other forces, chemical, vital, personal, exist; and in trying to identify these with mechanism it is driven to such violent theorizing that thought well nigh strangles itself in its own contortions; because, also, if the universal force is mechanical it is no

longer unknown, but science by empirical methods has found and exactly ascertained and defined the first cause and absolute ground of all things; and, finally, because it arbitrarily shuts out all philosophical and theological inquiry, and not only affirms that all knowledge is limited to the empirical, but proceeds to declare dogmatically that physical science within its empirical limits includes knowledge of every thing that exists, or ever has existed.

V. Man is spirit; the brute is not. A personal being considered abstractly from all connection with matter or nature is called spirit. It may exist in and act through a bodily organization.

The reasons for belief in the existence of spirit have been already set forth. The objection now arises that if man is spirit we must attribute a spirit or soul to every brute; not to the more intelligent only, but to the lowest, to the infusoria, to every organic cell or mass of tissue which has sensitivity in the slightest degree. And in fact the argument to prove that there is a spirit in man has often been presented so as to make this a necessary inference.

On this question it is impossible to dogmatize. But from the positions already secured it is evident that the assumption of individuated brute souls is unnecessary. The phenomena of animated life are adequately accounted for by the integral and absolute power immanently active in nature, evolving matter into more complex and more highly elaborated forms, and revealing itself through energies of higher and higher orders as matter becomes capable of being a medium for their manifestation. It is no more necessary to refer the vitality of every brute to an individuated soul than it is to refer the vitality of every plant, or the chemical force in water, or the mechanical force of a machine to an individuated soul. We have seen that the absolute power reveals itself by limiting and conditioning and thus individuating its inexhaustible energy. Conditioning its energy in time and space, matter appears; conditioning its energy in space, time and matter, mechanical force and mechanical structures appear; conditioning its energy in space, time, matter and mechanical force, elemental force and chemical compounds appear; conditioning its energy in all these, organic but inanimate life appears; and continuing to exert its energy individuated under all these conditions, animated life appears. But in none of these is the, as it were, imprisoned energy so individuated that it rises at any point out of the fixed course of nature, or distinguishes itself from the conditions which determine it from without. But as the divine energy continues active under these conditions it pushes forth into man, and in him is so far individuated that the man knows himself as an individual persisting through all changes in unchanging identity, endowed with reason, rational sensibility and free-will, dis-

tinguishing himself from nature, and endowed with a directive and determining power by which he directs his own energies and reacts on nature to direct its energies to accomplish his own chosen ends. He is conditioned not merely in space and time but also in self-consciousness. Thus rising above nature he is self-conditioning, self-regulating and directing, self-determining and self-exerting. For this reason it is necessary to recognize him as a spirit, and thus distinct from and above nature. This recognition is scientific, because it is necessary to explain the facts certainly known in self-consciousness. As proving that man is spirit, Kant emphasizes the practical reason, the imperative of conscience. It is by no means the only evidence, but it is sufficient. The consciousness of duty is as immediate as any intuition of sense; duty implies free-will; free-will implies that man is spirit; the consciousness of duty gives contents in consciousness to the idea of God. The imperative of the practical reason commands the surrender of life itself to duty; this would be the extinction of the individual himself, if the individual is only in the course of nature; thus it is decisive evidence that, however implicated in nature, man is also spirit; he belongs to a realm transcending nature.

For similar reasons it is unnecessary to adopt the threefold classification of man as body, soul and spirit. Thus Aristotle (*De Anima*) distinguishes in man a lower soul not separable from the body, from the higher soul which is separable from it. The former he calls the *ἐντελέχεια* of the body, that by which it is actually a living organization, the formative power which like an impression on wax gives form to the wax but has no existence separate from the wax. This is the subject of sensations and passions. But the higher soul, the *νοῦς* or *θεωρητική δύναμις*, has transcendent powers, and therefore is "separable from the body, as that which is eternal and immortal from that which is corruptible."* This is well said, as disclaiming the doctrine of the Pythagoreans and Platonists that all souls, alike of animals and men, are immortal. But it is unnecessary to assume that this formative actuality of animated life, inseparable from the living body, is a soul. It is sufficient to say that man is a spirit acting in and through a living animal organization.

Mr. Lewes objects that the spiritual hypothesis is untenable, because it is unscientific. It is an imaginary hypothesis incapable of verification. It also attempts to account for phenomena by introducing an *unknowable*; "the spirit is proposed as an agent, yet of its nature and agency we know absolutely nothing." This objection is founded on the assumption that consciousness is not a source of knowledge; that

* Lib. I., Cap. I., and Lib. II., Cap. I.

man has no knowledge of himself and his own powers; that the objective alone can be known. The falsity of this position has already been exposed.

Mr. Lewes further objects that, if the existence of spirit is granted, it does not account for the facts. Man, he argues, possessing this spirit, but isolated from society, would remain without language, without the moral ideas of duty to others, without the "capitalized experience" of the race, and "could no more manifest the activities classed under Intellect and Morality than the animal could." The reasoning would be equally valid if he had argued that if there were no external world, material or mental, this man possessing spirit but existing alone, would have no knowledge of an external world or of other rational beings. The existence of spirit in man is not, as the objection assumes it is, incompatible with existence in society. If a spirit does not exist in society, it can have no knowledge of society and social relations; but if it does exist in society, it will have that knowledge. I cannot conceive of anything in this fact which could have presented itself as an objection in the mind of Mr. Lewes or of any other intelligent person. Mr. Spencer speaks of "the prevalent anxiety to establish some absolute distinction between animal intelligence and human intelligence;" the objections sometimes urged cannot but suggest a "prevalent anxiety" to subvert this common belief.

Mr. Lewes further objects that "the spiritualist hypothesis of an imaginary agent" is unnecessary, because all the facts "can be perfectly explained by a real agent—the Social Organism." When Spencer and Lewes say that society is an organism and attempt to construct a sociology on that principle, they overlook the difference between a race or species and an individual organism. Moreover, they overlook the fact that the institutions, civilization and unity of human society can be explained only as those of a rational and moral system, not as those of a race of brutes. Thus they leave out the most essential and distinctive facts of human society. It is amusing to find Mr. Lewes speaking of this intellectual fiction, "the Social Organism," as a "real agent," and quietly setting aside as an "imaginary agent" the rational, free personality which every man knows in his own self-consciousness, and the reality of which is an essential factor in all knowledge.*

Mr. Spencer objects that a babe at birth manifests no more rationality than a dog; that its development to rationality is by infinitesimal gradations; and that "there is a series of infinitesimal gradations through which brute rationality may pass into human rationality." *May pass*—but there is no proof that it *does* pass—a very common

* Problems of Life and Mind. First Series. Vol. II., pp. 144-146, § 54.

inconsequence in the arguments of skeptical evolutionists. Here also is the false reasoning which I have exposed in a former chapter, that powers belonging to the human mind must be measured by the powers of infants. The objection is set aside by two indisputable facts: the one that man has the attributes of personality, reason, free-will, rational sensibility, consciousness of self, which so far as we have evidence, brutes have not; the other, that every babe normally developed manifests these distinctive powers, and no brute however developed and trained, ever manifests anyone of them. Mr. Spencer further objects that savages are gradually developed to the civilized man. To which it is sufficient to answer that, according to the investigations and conclusions of Tylor, Quatrefages, Tiele, Peschel and other anthropologists, all savage tribes, however low, so far as known, have religiousness and the sense of moral obligation and distinctions, and otherwise manifest attributes of personality. Thus, as has been before shown, the difference between the highest brute and the lowest savage, being a difference of kind, is greater than between the lowest savage and the greatest intellect of civilized nations, the difference in this case being only of degree.*

* Spencer's Psychology, Vol. I., pp. 460-462 & 206.

CHAPTER XVIII.

THE TWO SYSTEMS OF NATURE AND OF PERSONALITY.

§ 32. A Person's Knowledge of other Personal Beings.

I. WHAT a person or spirit is, man finds in his knowledge of himself and in this only. Man finds the entire contents of the idea of personality in his consciousness of himself in his own mental operations.

It is a principle already established that in the entire contents of human knowledge there is no element which has not been first given in intuition, perceptive or rational. Every element of the idea of person or spirit is given in man's consciousness of himself as an individual persisting in identity and endowed with reason, free-will and rational sensibility. No other element can enter into his conception of a person or spirit, any more than a blind man can have a conception of color. This is all the truth there is in the common assertion that all that man knows is derived from experience. The elements of all objects of thought must have been known through presentative or rational intuition before they became objects of thought. And every essential element in my idea of a person or spirit I must first have found in my consciousness of myself in my own mental operations.

This sets aside much empty speculation as to the origin of the idea of the spirit in primeval man. Such, for example, are the fancies that man obtained his idea of spirit from seeing his own shadow, or from his own dreams, or from the wind which cannot be seen, or the stars which cannot be touched, or the sky which cannot be measured, or from the "great silence" of the forest. This kind of speculation has no support from observed facts. And why should we look so far for what is always obvious within? For in fact man has the spiritual always before him in his own consciousness of rational thought and sensibility and free determination. What, he asks, is swifter than thought? Every hour he is conscious of exercising energies which are invisible and of receiving pain and pleasure from invisible sources. And no outward thing could suggest the idea of spirit unless it had first arisen in the man's own conscious thinking, feeling and willing. It is often assumed that the idea of spirit is attained with difficulty and is late in making its appearance. It is not so. The idea appears in

the most savage tribes; it exists spontaneously without conscious reasoning. When it is once originated in man's self-consciousness he carries it beyond himself; he believes in invisible spirits superior to himself and attributes a soul or spirit even to inanimate things. Thus a savage thinks that a watch is alive, or that a letter which he is carrying knows what he does and tells of it. And when one dies the survivors supply him with food and weapons, believing that phantom food and weapons will follow the soul of the dead into the land of spirits. Tylor says: "When Democritus propounded the great problem of metaphysics, 'How do we perceive external things?' . . . he explained the fact of perception by declaring that things are always throwing off images (*εἰδωλα*) of themselves, which images, assimilating to themselves the surrounding air, enter a recipient soul and are thus perceived." . . . This is "really the savage doctrine of object-souls, turned to a new purpose as a method of explaining the phenomena of thought."* Man's idea of spirit arises spontaneously in his own conscious mentality. What he slowly learns is that the things active around him do not always contain a conscious agent invisible like his own thoughts.

Fetichism exemplifies the same fact; for the fetichist believes that any material object may be a shrine for the divinity. And this is in fact a spontaneous and unconsciously intuitive turning of the mind in the direction of a fundamental reality; for fetichism is a blind animism, recognizing in nature a spiritual and invisible power. Berkeley cites Toricelli as likening matter to an enchanted vase of Circe serving as a receptacle of force, and declaring that power and impulse are such subtle abstracts and refined quintessences that they cannot be enclosed in any other vessels but the inmost materiality of natural solids; he also cites Leibnitz as comparing active primitive power to souls or substantial form.† To this day physical science does not profess to remove the mystery; it does not say what force is nor how it is related to matter; it only recognizes their observed concomitance. The most profound and satisfactory view is that which recognizes the absolute being as individuating its power in it, and in and through it progressively revealing itself in higher and higher forms.

Belief in spirit arises from man's knowledge of his own invisible energies, and is not of difficult attainment and late development; it appears to be spontaneous, constitutional, universal, and so tenacious as to be scarcely ever eradicated. It is worthy of note that when from any cause religious unbelief prevails among the learned, the belief in

* Tylor: *Primitive Culture*. Vol. I., p. 449.

† Berkeley: *Concerning Motion*; *Works*. Vol. II., p. 86.

spirits often breaks out in gross superstition and strange fanaticism among the people; as witness now the pilgrimages to Lourdes and elsewhere in France, and the belief in spirit-rappings.

II. A man has knowledge of personal beings other than himself.

1. The objection that man in his self-consciousness is shut up within his own subjectivity and unable to know other beings as personal, involves agnosticism. It is, however, a common objection, urged by persons who are not agnostics. For example, Prof. Newcomb says: "Should we see in visible masses of matter the same kind of motion which we know must take place among the molecules of matter as they arrange themselves into the complex attitudes necessary to form the leaf of a plant, we should at once conclude that they were under the direction of a living being who was superintending the execution of these arrangements. But *our knowledge of will as an agent is so absolutely limited to the study of our own wills that we cannot pronounce any generalization respecting it.*" If a man has knowledge of personality in himself, he of course can recognize the characteristics of personality when they appear in another. The objection, therefore, must assume that man has no knowledge of himself as a person. It necessarily issues in the universal skepticism of Hume.

2. The philosophy of Kant gives a basis for knowledge of personal beings so far as it allows knowledge of anything. Kant's intuition of sense is not intuition in its proper significance. Like Hume's, it is a mere receptivity of impressions. But he insists that the mind is also something more than that, and is so constituted as to give further knowledge. The impressions of sense cannot be grasped in the unity of intuition except as the mind gives the forms of time and space, and thus makes it possible to unite them. The mind also proceeds from individuals to generals. Knowledge is expressed in general propositions; and the mere reception of impressions cannot give such knowledge. Therefore again in order to knowledge, elements must be supplied from the mind itself; these are the categories of quantity, quality, relation and modality. We cannot stop with disconnected and unrelated impressions. We do not know merely disconnected impressions, but we know them also as defined in time and space, and also existing as substance and quality, cause and effect, in unity, plurality, totality and other categories. Knowledge implies also an element of necessity or universality, as in the axioms of mathematics and the judgments of causality and identity. Thus it contains elements which are not impressions of sense and cannot be resolved into those impressions. And thus Hume's theory of knowledge is refuted as inadequate. Consequently Hume's inference that knowledge is limited within the subjectivity of the subject of the sensations is no more valid;

the objective validity of knowledge is demonstrated in the sense in which Kant uses the phrase, namely, the equal validity of the facts to all men as well as to myself. It follows that my knowledge of an object is not an impression limited within my own subjectivity, but is the knowledge of an object which is equally real to all men. But if knowledge is thus common to all men, then through this community of intelligence men are capable of knowing one another as intelligent beings.

Thus Kant demonstrated that, even if knowledge begins in a reception of impressions, it must transcend those impressions and the subjectivity which as mere impressions they imply; that in all knowledge are elements of intellect transcending sense; and that men, transcending each his own subjectivity, come into communion with one another and know one another as rational beings.

3. The recognition of sense as perceptive intuition involving at once the intuition of the object perceived and of the self perceiving, implies without further argument the possibility of knowing rational beings other than ourselves. Kant by his false conception of sense as a mere receptivity of impression is obliged, in order to show the objective validity of knowledge, to resort to the roundabout process which I have indicated. He refutes Hume from his own premises and establishes the reality and validity of the mind's own action in all knowledge. But to one who recognizes perceptive and rational intuition, Kant's roundabout reasoning is unnecessary. Such an one, in accordance with our constant consciousness, ascribes to intuition the knowledge which Kant laboriously proves.

Perceptive intuition gives the knowledge of the *Me*, as distinguished from the not-me; equally it must give the knowledge of the *Me* as distinguished from the *Thou*. Says Krug: "Over against the *Me* always stands also the *thou*; that is, a not-me, in which the *Me* finds itself again, or recognizes a being like itself."*

4. The acts of our fellow-men reveal them to us as persons or rational free-agents. Intercommunication by language and by other signs, co-operation for common ends, reciprocal confidence, love, government, religious fellowship, the existence of society and its institutions, rest on the facts that men know one another as rational beings, and that the qualities of personality are common to them all. When one knows in self-consciousness what the characteristics of personality are, he can recognize them when manifested in another.

5. That man imagines that he finds the characteristics of personality in an impersonal thing and so mistakes the impersonal for the personal,

* Article *Ich*: Vol. II., p. 427. Encyklopädisch-philosophisches Lexicon.

is no argument against the reality of his knowledge of personal beings; for just so scientists sometimes mistake the action of one natural object for that of another. The savage does not mistake his fellow-men for brutes or stones. But on account of his limited knowledge the horizon which divides himself and his tribesmen from the supernatural is very near; and he thinks he sees the supernatural in what he afterwards discovers to belong to nature only. The horizon widens and widens till in his higher development he comes to know the one Supreme God. But this does not prove that the spiritual and supernatural are unreal. It reveals the fact that, in every stage of his development, man finds the supernatural and spiritual in himself, and expects to find the same in other beings; and, however high he rises in development, he always finds the supernatural and spiritual, not only with him in his fellow-men, but beyond and above him in a God.

6. It is objected that man's conception of God and of all supernatural and spiritual beings is anthropomorphic and therefore false. This, however, is only a pictorial way of representing to the imagination the objection already considered in its abstract form, that all knowledge is unreal, because relative to our faculties; or, knowledge is impossible because there is a mind that knows. If any being is endowed with intelligence and rationality, intelligence and rationality in every being must be essentially the same; otherwise the so-called intelligence in one, being contradictory to the intelligence of another, would not be real knowledge; and the so-called rationality, being contradictory to another rationality, would be irrational. If, then, man is endowed with reason, all knowledge which is in accordance with reason is in accordance with the reason of man; and in this sense all real knowledge must be anthropomorphic, for if it were not it would be contrary to reason. There is as much anthropomorphism in physical science as there is in theology. Prof. Fiske admits that belief in spirit is scarcely more anthropomorphic than belief in power.* The affirmation that the sun attracts the earth is as really anthropomorphic as the affirmation that "nature abhors a vacuum." Since the principles and laws of science discovered by the human mind are found to be true of stars in the remotest space within the range of the telescope, and in the remotest discoverable distances of past time, and in the utmost sphere of microscopic vision, it is reasonable to conclude that man's reason and intelligence accord with the reason and intelligence which are universal and eternal.

* Cosmic Philosophy. Vol. II., pp. 449, 450.

§ 83. The Two Systems.

We have scientific knowledge of two grand systems in the universe, the natural and the rational. Impersonal beings exist in the unity of the system of nature; personal beings exist in the unity of the system of reason, free moral agency, and moral government.

Man has knowledge of himself as connected with both of these systems. In the impressions of sense, in his locomotion in space, in the weight of his body, and in all his action through it on his environment and its action on him, he knows his own organism as a part of the system of nature. He knows the outward world as the sphere in which and on which he acts, and as containing the forces which he uses and the resources of which he avails himself in accomplishing his own ends. In a similar manner man in his knowledge of himself and other men as persons, knows himself existing with other personal beings in the unity of a rational and moral system. He knows this world of personality also as the sphere in which and on which he acts and as containing the spiritual agencies and influences by which he accomplishes his ends. We believe in a spiritual world as the sphere and environment of our spiritual energies just as we believe in the natural world as the sphere and environment of our physical energies.

Thus man knowing himself as nature and spirit, knows himself connected with both spheres and finds the powers of both these grand systems of the universe meeting in and sweeping through his being.

§ 84. The Existence of a Personal God a Necessary Datum of Scientific Knowledge.

The existence of the personal God or the Supreme Reason energizing in the universe is a necessary datum of scientific knowledge. So far from its being true that God is contradictory to Reason or is Unknowable, his existence is a necessary presupposition in all knowledge which has scientific accuracy and comprehensiveness; that is, in all accurate and ascertained knowledge of the particular realities of the universe and their comprehensive unity and harmony in a system of things. The existence of God is the keystone of the arch of human knowledge, without which the whole fabric breaks down and crumbles to pieces.

I. The existence of God is necessary to the trustworthiness of the human reason as an organ of necessary and universal principles. If man has self-evident knowledge of any principle which is a universal law of thought; in other words, if he has knowledge of any principle the contradictory of which is absurd, then Reason is supreme and absolute in the universe, and the principles and laws which reveal

themselves in human reason as regulative of all thought and energy, exist eternal in that supreme and absolute Reason. Then the universe is grounded in Reason, and Reason is everywhere and always the same; Reason in God is the same in kind with Reason in man, who is in the image of God. This datum or presupposition is indispensable to the trustworthiness of human Reason.

Hence the demand that the trustworthiness of Reason be established by proof or argument is inadmissible. Reason can demonstrate itself only by its own rationality as the sun can reveal itself only by shining. Some writers say that the trustworthiness of Reason can be sustained only by an appeal to morals. God, it is said, could not do so wrong an act as to give man a constitution which would always deceive him. As Mr. Chubb put it, "God would not be so mean as to do it." But this appeal to the moral implies the presupposition of a righteous God. It is an appeal to the practical reason for verification of the speculative reason. The only solid basis of scientific knowledge is the recognition of Reason as absolute and supreme, and of the human mind as Reason, and therefore so constituted that its knowledge is illumined and its thought regulated by principles that are eternal and regulative in the Absolute Reason. The existence of God the Absolute Reason, is a necessary prerequisite to the possibility of scientific human knowledge.

II. The existence of God is necessarily prerequisite to the community of human knowledge. Community of knowledge implies the participation of men in a common knowledge of facts and truths, a common recognition of the same laws of thought, the same moral ideas and law, the same standard of perfection and of good. Necessary to this is the supremacy over all men of one and the same absolute and unchanging Reason. And this Reason energizing is the personal God.

III. The existence of God is necessarily prerequisite to the completeness of human thought in the knowledge of all particulars in the unity of an all-comprehending system. Human thought consists in apprehending and distinguishing particulars, and in finding their relations in the unity of a whole. The ultimate and necessary problem of the Reason is to find the unity of the All, or to know the All in One. The existence of God is a presupposition necessary to the solving of this ultimate problem; and this presupposition is either explicit or implicit in all scientific knowledge of the many in one.

It is only as we recognize God that we can know natural things in the unity of a system of nature. We have seen that the archetypal thought or plan of the universe is eternal in the absolute Reason. This excludes caprice, chance, fate, and all disorder. God's almightiness is controlled by Reason; it cannot give reality to what Reason knows to be absurd, and it acts only in accordance with perfect wisdom and love

which regulate all God's action. But since it is an eternal truth of Reason that the infinite can never be completely expressed in the finite, the realization of the archetypal thought must be under limits of space, time, and quantity, and therefore must be always progressive, and at every point of time and boundary of space and limit of quantity must be incomplete, awaiting further development. But since nature as it exists at any point of time is so far a realization of the thought of God, the divine Reason energizing on and through it produces results commensurate with its existing limitations; yet as continuing the realization of the same plan of perfect reason, all further evolution must be in harmony with the preceding, to whatever extent it may transcend it. Thus we have all natural things and forces through all time and space in the unity of a rational system. But without a God nature expresses no rational thought, conforms to no rational law, realizes no rational end and has not the unity and harmony of a system.

When rational beings appear, they also exist in the unity of a rational system in their common relations to God and under the same universal law of love. They are in unity, not by a physical force like attraction, but by common truth, law and ends influencing them as rational free agents under God, the Father of spirits. Without God there could be no system of rational free agents under the universal law of love; and in fact rational free agents could not be conceived as existing.

And the two systems are in the unity of a universe through their common relations to God. But there is no antagonism between nature and spirit, between the natural and the moral systems, for both are in unison as realizing the archetypal thought of absolute reason. The finite spirit itself is evolved only when nature is prepared for its presence and action. A finite spirit is a person considered abstractly from matter and physical nature, and may conceivably exist separate from any material organism. But since personality makes its appearance in the evolution of nature and is known to us in a human body, there is no antagonism between the two, and finite spirits may always exist and act in some organic medium, though we know not what ethereal refinement the future body may attain. The antagonism of nature and spirit is abnormal and arises from sin by which the spirit has perverted itself in the wrong action of free-will.

And nature is in harmony with spirit as the sphere in which spiritual creatures live and act under the limits of time and space, and as subordinate to all the ends of the spiritual system. Thus the two systems become one as realizing the archetypal thought of God.

In this system sin is the only essential evil. All other privation or suffering is incidental to the limitations inseparable from the finite. Borne in fortitude or removed by energy, and in either case triumphed

over by faith and love, they become occasions of discipline and development, and of spiritual enrichment in the true good. Sin is possible to finite free agents through the individuation inseparable from finiteness. The law of love, grounded in the constitution of the universe, calls men beyond their individuation to recognize their unity in their common relation to God and their unity one with another in the rational system, in which they are to be workers together with God in the progressive realization of His perfect wisdom and love. Every thing and every person in the universe is included in this all-embracing dual system of nature and spirit. Nothing exists in isolation; nothing exists for itself; "no man liveth for himself." Blessedness is possible to man only as he lives for others as well as for himself in obedience to the law of universal love, and thus in harmony with the supreme and absolute Reason.

In this system the conflict is not between spirit and matter; matter is the instrument of spirit. The conflict is between God and all wise and righteous beings against the unreasonable and sinful. It is the conflict of love against selfishness, of the spiritual against the earthly and the sensual. In this conflict the good must progressively prevail over the evil. In expectation of that triumph in the redemption of the human race, "according to His promise, we look for new heavens and a new earth wherein dwelleth righteousness." As man unites in himself both nature and spirit, and the powers of both the natural and the rational system meet in him, Jesus the Christ, "the word made flesh," unites in Himself both the human and the divine; He is the ideal of man receiving the assaults of evil and standing against them in love, overcoming evil with good, and by humiliation and suffering, the cross and the grave exalted to the heavenly glory; and at the same time in him God is most completely revealed as the God of love, the Most High coming down to the lowly to lift it up. And as through ages upon ages God continues in the universe action of which this is the type, he will not only offer himself as the redeemer of rational beings from their lowliness and sin, but will redeem nature itself more and more from its restrictions, imperfections and pains. "The creation itself also shall be delivered from the bondage of corruption into the liberty of the glory of the children of God." No imagination can conceive what the world-births are to be with which already, as Paul says, "the whole creation groaneth and travaileth in pain together;" nor what the heavenly cities, the fields of light, the paradises of God may be which may take the place of these worlds of gross matter; nor what the purer light may be in that abode where there is no more need of the sun, "for the glory of God lightens it and the Lamb is the light thereof." And as to the saints of God peopling these heavenly abodes

no imagination can conceive what may be their transcendent beauty, swiftness and power, the vast range and keen penetration of their intuition like a keen, far-reaching eye-sight, the immensity of their knowledge, the majesty, grace, and energy of their love, and the immediacy and fullness of the vision of God, of which in their progress they may have become susceptible.

To the Christian theist these scriptural anticipations, reasonable in themselves, are made more conceivable by the scientific theory of evolution. Any theory of evolution excluding the presupposition, explicit or implicit, of Absolute Reason as the ultimate ground of the universe and energizing in its evolution, must be inconsistent with itself, incompatible with the necessary laws of thought, and contradictory to human reason.

INDEX.

A.

Abelard, 80.

Abiogenesis, 458, 459, 461.

Absolute Being, discussion of, 286-292; definition, 286, 154; its existence a necessary principle of reason, 286 f., 505 f., 135; acknowledged by Spencerian agnostics, 286, 288, 469, 505 f., 513; what it is, manifested in the universe, not known *a priori*, 287, 75 f.; is the All-conditioning, 288; not an empty idea void of contents in consciousness, 288; significance if it results from the registered experience of mankind, 288; false conceptions, 289 f., 167; objections founded thereon, 290 f.; personality of, 291 f., 506, 514, 169 f., 191, 193, 448.

Abstraction, 53; abstract or formal thought, 54; its inadequacy, 56 f.; exemplified in theology, 6; abstractions hypostasized, 201.

Absurd, the, cannot be made real, 185.

Action, human, uniformity of explained, 399 f.; at a distance, 421, 425, 497.

Adjustment, 462, 493, 489.

Æsthetics, Principles of, 230-243; æsthetic emotions, 243-248; culture, 248-250; æsthetics and theism, 250, 251; theories, 251-255.

Æsop, 334.

Agassiz, 52.

Agnosticism, complete, defined, 10 f.; partial, 11; involves the complete, 11, 513, complete not tenable, 17 f.; any theory involving it is false, 19 f.; atheistic theories involve it, 5, 81 f., 133, 151; Spencerian agnosticism disproved by Hegel's maxim, 18; contradicted by the practical side of man's nature, 35; contradicts itself, 75, 135, 446 f., 470 f.; confounds the unthinkable with the inconceivable, 27 f.; false basis of ethics, 195 f.; false conception of the absolute, 513.

All, the, unity of, not numerical, 83.

Almightiness of God regulated by reason, 528 f.

Altruism of Comte, 216, 478; of Spencer in conflict with egoism, 479; complementary in Christianity, 479 f., 212.

Ambrose, greatness of man, 332.

Anaxagoras, reason the cause of the world, 184.

Annihilation, 536.

Anselm, *crede ut intelligas*, 80; a lie not right if God should will it, 198.

Anthropomorphism, 110 f., 147 f., 451 f., 559.

Anticipations of genius, 71, 66 f.

Antinomies of reason, the objection and the answer, 128-135; of physical science, 419.

Antoninus, M. A., the world his country, 210.

Apprehension, 49 f.

Aquinas, Thomas, 57, 183, 362.

Archetypes eternal in the absolute reason, 90, 495, 516 f., 153 f., 182 f., 191 f., 250, 268.

Archimedes, 69, 245.

Argyll, Duke of, 338, 411, 501, 545, 546.

Aristippus, 257, 258.

Aristotle, 69, 71, 109, 114, 122, 152, 154, 158, 184, 196, 210, 331 f., 552.

Arnold, M., 32, 214, 340, 344, 414.

Artist, above nature, 228.

Association of ideas, theory of ethics founded on, 193; and of rational intuition, 135 f.; and of memory, 48.

Astronomy, Copernican, 333, 491; Ptolemaic, 294, 464, 548.

Atheism, limit of, 4; involves complete agnosticism, 4, 5, 81 f., 133, 151, Bacon, the influence of philosophy on, 326; its promulgation as implied in physical science, 337; reaction in superstition and fanaticism, 556 t.

Atkinson, 453.

Atoms, ancient and modern conceptions, 501, 416 f.; vortex-atom, 417; manufactured articles, 497 f.; incompatible with monism, 446.

Attraction, difficulties in scientific explanation of gravitation, 421 f.; of cohesion and chemical affinity, 423.

Augustine, 19, 25, 79, 109, 157, 183, 197, 388, 510.

Austin, 189.

Authority, 188, submission to, 206.

Automata, conscious, 548; intelligence lapsed into automatic action; Spencer and Lewes, 438.

Averages, law of, 400 f.

B.

Bacon, Lord, 42, 71, 88, 110, 303 f., 306, 311, 326, 328, 333, 548.

Bacon, Roger, 69.

Bain, Prof., 137, 252 f., 364, 365, 366, 446.

Bakunin, 486.

Basil, 332.

Beauty, discussion of, 230-255; definition, 230 f.; outshining of truth, reveals an ideal, 231 f.; modes in which revealed, 232 f.; is spiritual, 234 f.; has objective reality, 238; manifested only to reason, 238 f.; universal standard, 239 f.; distinguished from sublimity, 241 f.; the contrary of the ugly, 242 f.; perceived by the intellect, 243; emotions of the beautiful, 243-248; erroneous theories, 251-255.

Being, known in presentative intuition, cannot be defined, 155; determinate, 156; known in the "forms" of rational intuition, 156; in its whole reality, 156; substance and quality, 157; the fundamental reality, presupposed in other ultimate realities, 157; modes of its existence, 158-167; knowledge begins as the knowledge of being, 167 f.; and of personal and impersonal, 168 f.; the determinate being the unit of thought, 158, 171 f.; not primarily the genus, 171 f.; not the one substance of Spinoza, 172 f.; finite beings real beings, 174 f.; not an attribute but the subject of attributes, 175 f.; determinateness not limitation, 176 f.; attributes common to all beings, 176; Kant, Fichte and Hegel, 169 f.; not a vacant phase of thought, 174; affirmation of it not indeterminate and weak, 175, 176.

Belief and reflective knowledge, 72, 76 f.; 79 f.; belief of testimony, 80; Clifford on belief without scientific investigation, 39.

Bentham, 260, 277.

Berkeley, 432, 556.

Body, spiritual, 386, 437.

Boole, 57, 178.

Boscovich, 88.

Bowen, Prof., 97, 159, 60.

Bowne, Prof., 97, 159.

Boyle, Robert, universe a sort of clock, 529.

Brain, molecular motion of, does not explain thought, discussion of, 434-454; J. R. Mayer on, 438; impossibility of, illustrated, 316, 317.

Bray, Charles, on Force, 368, 381 f., 435.

Bridgman, Laura, 544.

Brotherhood of man, 213 f., 208-211.

Browne, Sir Thomas, 206.

Browning, Robert, 118.

Brown-Sequard, Dr., 381.

Brutes, materialistic objection from their attributes, 537-554; mental qualities of, are qualities of men, 537; qualities of personality distinguishing men from, 537-543; anthropomorphic conceptions of, 542; attainments of men impossible to brutes, 543 f.; objection, if valid, would prove that brutes are persons, not that men are impersonal, 546; man supernatural, 547-551; man is spirit, 551-554.

Bryant, W. C., 239.

Büchner, Dr., 117, 435, 375.

Bucke, Dr., R. M., 214.

Buckle, 218 f., 373, 401.

Buddhism, 221, 516, 211.

Buffon, on probabilities, 85.

Bulwer-Lytton, 39.

Bunsen, 251.

Burke, theory of beauty, 251.

Butler, Bp., on probability, 86; conscience, 188.

C.

Cabanis, 435.

Caird, Philosophy of Religion, 51, 524, 526, 529.

Calderwood, Prof., criticism of Edwards, 352 f.

Caprice, not involved in freedom of will, 351, 361-364, 394, 399; nor in God's almightiness, 523 f., 526; Dr. Samuel Clarke's error, 529, 530.

Carlyle, 57, 213, 343.

Carpenter, Dr., 140, 325, 367, 381, 415, 419, 461.

Categories, 152-154; Aristotle's, 152, 154, 158; Kant's use of, 152, 153, 154.

Cause, definition, 158 f.; implies power, 159; distinguished from the causal judgment, which is a rational intuition, 114; used by Comte though denying knowledge of it, 127; involves a first cause or absolute being, 168; complex of causes, 62; causal efficiency and the will, 349 f.; final causes, 38 f., 502 f.

Chabas, on ancient Egyptian ethics, 224.

Champollion, the Rosetta stone, 67.

Character, primarily choice, 396, 354, 357-361; object of the choice a person or persons, 357; object of right choice, God

- In his relation to all persons in a moral system, 338 f.; the love required in God's law is primarily a free choice, 359 f., 207; character manifested in subordinate choices and volitional action, 360; character, secondarily in the state of the intellect and sensibilities and in the habits, 360 f.; the rational system presupposed in moral character, 361; influence of character on subsequent determinations, 396 f.; voluntary action constantly modifies character, 397 f.; man free with whatever character, 398; actions not transitions from complete indetermination, 398 f.; practical result of theory of freedom of indifference, 399; a basis of uniformity of action, 399-402.
- Choice, and volition, 349, 351-357.
- Christianity, influence on the progress of civilization, correcting Draper's misrepresentation, 323-333.
- Chrysippus, 41.
- Chrysostom, 237, 332.
- Church, catholic, responsibility for mediæval civilization, 329 f.; Guizot on, 329.
- Cicero, 183, 209 f., 223, 228, 332.
- Circumstances, freedom from control of, 373-384.
- Civilization and Christianity, 328-333.
- Clarke, Samuel, 491, 528, 529; significance of his *a priori* argument for existence of God, 203.
- Clement of Alexandria, 76.
- Clerk-Maxwell, 417, 418, 422, 423, 424, 496 f., 498.
- Clifford, Prof., 20, 39, 63, 96, 128, 164, 296, 368 f., 431, 475, 524.
- Climate, effect on human development, 373-375.
- Cobbe, Frances P., 147.
- Coleridge, 115, 238.
- Collard, Royer, 98, 123.
- Common sense, meanings, 81.
- Comte, 69, 88, 92 f., 125, 127, 137, 149, 168, 214, 305, 312, 313, 321 f., 323, 330 f., 338, 451, 468, 479, 546; his positivism as a basis for materialism, 423-434.
- Concrete thinking, definition, 54; scientific investigation principally by it, 56-59; principles underlying, 60 f.; as essential in philosophy and theology as in empirical science, 61.
- Conflict of physical science and theology, 319-344; origin in error or ignorance, 319-321; reconciliation by correcting error and enlarging knowledge, 321-326; alleged historical antagonism exaggerated, 323-334; effect of Christianity on civilization, 328-333; correction of theological opinion may be necessary, 334; extent and limitation of the authority of scientists as teachers, 335-337; legitimate conflict with atheism disguised as science, 337-340; no extraordinary reason for alarm now, 340-344; harmony from necessary relations of empirical, philosophical, and theological science, 304-319; the moral harmony and the moral conflict, 560-564.
- Conscience, defined, 195; categoric imperative outstripped by love, 490, 205-207, 276, 277.
- Consciousness, primitive, is knowledge of the subject, the object and the knowledge, 12, 10, 91; unity of, inexplicable by molecular motion, 443. See Self-consciousness.
- Constantine, 26.
- Copernicus, 327, 333, 491.
- Copula, hypostasizing, 175.
- Cosmic agencies, theory that they determine character and civilization and disprove free-will, 372-376.
- Cousin, on the ideal, 251.
- Creation of the universe, 508-510; in what sense, 508, 510; Augustine's conception, 510; compatible with evolution and required by it, 508 f.; individuating, 513-516; not something out of nothing, 515; Buddhism contrasted with theism, 516.
- Creative thought, 54-56, 227-230.
- Crede ut intelligas, 76 f., 80.
- Criteria of primitive knowledge, 26-31; first, 26; second, 27 f.; third, 29 f.; fourth, 30 f. Hamilton's mental impotence, 27.
- Crooke, 73.
- Czolbe, 424.

D.

- D'Alembert, 116.
- Darwin, Charles, 477, 478, 542; Erasmus, 252.
- Darwinism, 459-463, 465, 467.
- Davy, Sir H., 327.
- Death, a liberation, not a limit, 385.
- Deism, 510 f., 529, 312.
- Democritus, 462, 556.
- De Morgan, 93 f.
- Denslow, Dr., 482, 485.
- Descartes, 26, 71, 82, 97 f., 116 f., 137, 174, 176, 197, 198, 464.
- Determinate being, object of knowledge at its beginning; the unit of thought, 171-175; determinateness of being does not limit, 176-178, 291.
- Determinations of the will, 349-357, 364 f., 394-396.
- d'Holbach, Baron, 435.
- Diderot, 136, 193, 368, 372.

Difference and relation, 165-167, 51.
 Differentiation, 49, 51, 52.
 Discovery by thought, not of any element transcending experience, 72; what it discovers, 73-75; the unknown from the known, 75 f.; by induction and the Newtonian method, 61-72.
 Dilettantism, 41.
 Disgust, emotion of, 248.
 Doctrinal theology, 2.
 Dogmatism of scientists, 337-339.
 Donne, Dr., 236.
 Dörner, Dr., 76, 108, 287, 388.
 Draper, Dr., 308, 326, 383; contradictions of facts in his representation of the opposition of religion to science, 329-333; his theory of the development of civilizations by cosmic agencies, 373-376.
 Dufay, 68.
 Duns Scotus, 197, 198.
 Duration in time, a mode of existence, 165.
 Duty, significance, 187; as mere obedience to the categorical imperative of law, 205-207; Kant's ethics defective, 206; Kant's apostrophe to, 379; possible to be done in any circumstances, 378 f.

E.

Education of the human race, 518 f.
 Edwards, on love and self-love, 263; on the unprecedented "infidel apostasy" of his day, 341; on freedom of the will, 363, 387, 390; on God's immanence in nature, sustaining it, 512; Calderwood's criticism of, 352 f.; the younger Edwards, 390.
 Ego or person, the world and God the three realities known, 14 f.; Kant's transcendental ego, 99-109.
 Egoism and altruism, 211 f., 479 f.
 Eliot, George, 240, 480; Eliot, President, 319.
 Elements, or simple substances, 416.
 Eloquence, a virtue, 216; distinguished from acting, and not an amusement, 246.
 Elsler, Fanny, 542.
 Empirical science, definition, 294; two divisions, physical and psychological, 295, is the first grade of scientific knowledge, 294; proof that is so, 301 f.: proof that it must have the two divisions, 302; harmony with noetic and theological sciences, 304-319; their alleged conflict, 319-344; depends on the principles of noetic science, 8, 304 f., 122 f., 123 f., 125, 126, 430, 317-319, 15 f., 321-323.
 Emotions, 345, 350; instinctive or natural, 346; rational, 347.
 Encyclical of Pius IX., 329.
 Energy, potential and actual, the sum always the same, in what sense true, 505 f.
 Energizing Reason the ground of the universe, 82-84, 448, 468-471, 420, 361.
 Enjoyment. (See Happiness.)
 Epictetus, 41, 223.
 Epicurus, 259.
 Essence, used instead of substance, 157.
 Ether, 417, 419.
 Ethics, discussion of, 183-226; (for analysis, see Table of Contents, chap. ix.) Significance of ethical terms, 187-189; certainty of moral ideas and distinctions, 189 f.; false theories, 193-203; moral distinctions founded on the association of ideas, 193; derived from the idea of happiness, 193; originate in the feelings, 193 f.; Moral Sense, 195; created by the fiat of God's will, 195-198; eternal in the constitution of things, independent of God, 198-203.
 Eudaemonism, 257.
 Evil, the essential, 278; relative, 278; kingdom of Satan and of God, and their antagonism, 278 f., 521, 525 f., 527, 532-536, 564; suffering and sin in relation to God's government, 528-536.
 Evolution, materialistic objection from, 455-536. (For analysis, see *Contents*, § 80.) Ethics founded on, 216-218, 467 f., 475-488; and creation, 472-474, 508-510.
 Excitement, pleasure of, not æsthetic emotion, 247; morbid, 348.
 Existence, modes of, 158-167.
 Experience, of the individual not the origin of rational intuition, 135-137; nor that of the race, 137-142; knowledge not confined to, 73-75, 450, 15-17; knowledge begins in experience, 10, 17, 72 f., 76 f.
 Extension in space, 162 f.
 Eye, Tyndall on its evolution, 462.

F.

Faculties of the mind, 45, 78, 32 f.
 Fairchild, Prof., 200.
 Faith, present commonly in human action, 37 f.; and intelligence, 76 f., 79 f.; synthesis of reason and, 7 f., 9; used with various meanings, 79-81; faith-faculty, 7, 77-79.
 Fallibility and knowledge, 20-26.
 Fancy, 55, 228.
 Faraday, 454, 499.
 Feeling, willing and knowing, 31-43; distinct but not separate, 31 f.; philosophy must recognize this, 32-35; feeling and willing not in themselves, criteria of knowledge, 34 f.; are so with certain

- qualifications; their relation to knowledge, 35-38; errors of skepticism from overlooking, 38-43; false conception of the love of truth, or the scientific spirit, 39 f.; relation of right moral and religious spirit to the scientific spirit, 43; feeling a source of knowledge, 348; feelings not the basis of ethical distinctions, 193-195; nor of æsthetics, 243; nor of the prudential feelings and self-respect, 283. (See Sensibilities and Emotions.)
- Felix, Minucius, 220.
- Ferrier, Prof., David, 440; Prof. J. F., 145.
- Fetichism, 25, 556.
- Feuerbach, 174.
- Fichte, I. H., 174, 214, 314, 428; J. G. Fichte, 20, 49, 76, 168, 169, 273, 388.
- Final cause, 38 f., 502 f.; Lord Bacon on, 304.
- Finite and infinite. (See Absolute;) limitation and quantity, 165; finite beings real, 174 f., 507 f.; finite and infinite not the same as phenomenal and real, 515; objections to theism from finiteness not valid, 518-531; finite persons essential to a moral system, 526; finiteness of knowledge, 22.
- Fiske, Prof. John, 112, 149, 298, 420, 439 f., 451, 462, 469, 489, 492, 501 f., 550, 449.
- Flammaria moenia mundi, 192, 516.
- Flint, Prof. Robert, 184.
- Flourens, Gustave, 486.
- Force and matter, some other cause necessary to account for the universe, 420-424, and to account for personality, 424 f.; force, matter and motion said by Spencer to be eternal, 472, 497.
- Force, persistence of, does not account for gravitation, 421 f.; nor cohesion and chemical affinity, 423 f.; need of something more recognized by scientists, 424 f.
- Force, persistence of, materialistic objection founded on it, 434-454. (For analysis, see *Contents*, § 79; see Power.)
- Form and matter, 152 f.
- Franklin, B., 67, 68.
- Free agent, defined, 409; known in self-consciousness, 98 f.; power of finite free agents circumscribed by the Absolute Reason, energizing in expressing eternal truths and realizing the archetypal plan, 524-526.
- Freedom, different meanings, 386-389.
- Freedom of the will, or moral freedom, definition, 361; inheres in rationality, 361 f.; is the capacity of choosing in the light of reason, 363; different definition of Edwards, 363, power of contrary choice, 363; knowledge of free will of the highest certainty, 365-370; objections, 370-372; theory that man is determined by cosmic agencies without freedom, 372-376; freedom notwithstanding man's implication in nature, 376-386, 410, 547; compatible with the uniformity of human action, 399-402; the law of averages, 400; free will and sociology, 402-407; not caprice or arbitrariness, 351, 361-364, 394, 399; not even in God, 523 f., 526, 529, 530.
- Froebel, 318.
- Froude, 267 f.
- Function precedes structure, 498.
- Fundamental Theology, 2.
- G.
- Galileo, 55, 57, 423.
- Garfield, 405.
- Genius, anticipations of, 71, 72.
- Gladstone, 85.
- God, known in experience, 1; is energizing reason, 8, 81-84, 448, 468-471, 420; essentially the same in kind with man's reason, 8, 82, 182 f., 143-151; universe grounded therein, 83, 171, 426; necessary to science, keystone of the arch of scientific knowledge, 560-564, 312-314, 82 f., 361; Creator, 508-510, 515; is the *prius* of the universe, 172; is a personal being 178, 291 f., 506 f., 527 f.; immanently active in the universe, 510-513, 550; reveals himself in the finite, 513-516; not creating something out of nothing, 515; realizing the eternal archetypal plan, 516-518; progressively realizing it, 518-523; in uniform and continuous action according to law, not with caprice, 523-526, 529, 530; determinate but not limited, 176-178; his existence consistent with scientific evolution, 468-471; demanded by it, 502-537; almightiness regulated by reason, 198, 523, 526, 529, 530, 561, 562; is Love, 526 f.; with all rational creatures in a rational system, 361, 526 f., 500; confessions of great scientists, 327 f.; resting-place of the intellect, 203; eternity and immensity, 202 f.
- Goethe, 13, 228, 239, 244, 249, 273, 324, 336, 381, 511, 549.
- Golden rule by heathen writers, 222.
- Good, the, fourth ultimate idea of reason, 256-285 (for analysis see *Contents*, chap. xi.), 154, 180.
- Government, defined, 189.
- Grades or planes, series of in evolution, 495-502 (for analysis see *Contents*, § 80, V. 4-9).
- Grades of scientific knowledge, 293-344 (for analysis see *Contents*, chap. xiii.).
- Gravitation, 124, 418, 421-423; law of, when discovered, regarded as atheistic, 491.

Gray, Prof. Asa, 460.
 Green, Prof. T. H., 8 f., 79.
 Griffin, Gen., 482 f.
 Grove, W. R., 159, 413, 419.
 Guizot, 329.

H.

Haeckel, Prof., 303, 339, 435, 459, 461, 466, 476, 480.
 Hafiz of Shiraz, 222.
 Hall, Dr. Marshall, 334.
 Hamilton, Sir Wm., 18, 21, 27, 35, 41, 51, 58, 79 f., 115, 129, 133, 289, 365, 390 f.
 Happiness, in what sense used; distinguished from well-being, 256; the good does not consist in it alone, 257, 258-266; not of the same kind and equal worth, 263-266; essential in well-being, 256, 274 f.; desire of, as a motive, 347 f.; not the one ultimate motive, 260-263, 482; not a basis for true ethics, 193, 476 f., 481-486.
 Hargreaves, 55.
 Harmony with self, God and the universe as essential good, 274; of the systems of nature and spirit, 560, 562 f., 415-418, 418-420; redemption of nature, 563, 564; harmony of theological, noetic and empirical science, 304-344 (see *Contents*, §§ 60, 61.)
 Harris, Prof. S., 504.
 Harrison, Fred., the great Human Being, 150.
 Hartmann, 199, 215, 424.
 Harvey, 55, 333.
 Hazard, 354.
 Heathen, agreement with Christianity as to the real principle of the law, 221-226; exaggerated assertions of, 220; contrast, 329-333.
 Hedonism, defined and refuted, 257-266 (see *Contents*, § 48), 347 f., 193, 476 f., 481-486.
 Hegel, 18, 109, 169 f., 175 f., 199, 290. Hegelianism in Christian theism, 529, 174-176.
 Hellwald, 477.
 Helmholtz, Prof., 110, 119, 123.
 Helvetius, 435.
 Heraclitus, 509.
 Heredity, 138 f., 444 f., 498.
 Heroism, no ground for it in ethics of materialism, 483.
 Herschel, Sir John, 419, 498.
 Hesiod, 127.
 Hickock, 88.
 Hildebert, 251.
 Hillel, 204.
 History, purpose in, 376.
 Hobbes, 53, 197; hypostasizing the copula, 175.
 Holiness, predicated of persons, 188.
 Holmes, O. W., on freedom of will, 277.

Homer, 70, 241, 249.
 Homogeneous, Spencer's, 455, 464, 472, 495.
 Hopkins, Mark, 204.
 Horne, Bp., on atheism implied in the law of gravitation, 491.
 Human Being, the great, Positivist worship of, 150.
 Humboldt, Alex. von, 315.
 Hume, 65, 88, 95, 100-103, 125, 143, 149, 190, 194, 432, 557, 558.
 Hutcheson, Moral Sense, 195.
 Huxley, 39, 47, 95, 297, 339, 369, 418, 429, 431, 432, 435 f., 459, 466, 548.
 Hylozoism, 424.
 Hypermaterial power revealed in evolution, 501 f.
 Hypothetical or Newtonian method, 65-72. (See *Contents*, § 14, II. 1-8.)

I.

Ideas of reason, ultimate. (See *Realities*.)
 Ideals, 227-230 (see *Contents*, § 41); created by imagination, 55, 228; importance in thought and action, 55, 56, 67, 69, 229 f.; nearer perfection than the real object, 228; revealed in beautiful works of art, 230 f.; revealed in the cosmos and natural things, 234-238; archetypal ideals progressively revealed by God's action in the universe, 516-523.
 Idealism, subjective, involves universal skepticism, 125 f., 431-433; Berkeley's consistently held the reality of spirit, man and God, 432, 556; phenomenalism, materialism and idealism each excluded, 167-171.
 Identity, and individuality, 160 f.; known in self-consciousness, 97 f.
 Iliad, an illustration, 316 f.
 Imagination, 54-56, 67, 227-230.
 Immanence of God in the universe, 510-513.
 Implicit consciousness, 91, 12, 10.
 Inconceivable, the, distinguished from the unthinkable and unknowable, 28.
 Individual, rights of, in relation to the state, materialistic doctrine contrasted with the Christian, 477-481, 328-333.
 Individuality, of a person, not participated with another, loneliness of, 414; and identity, 160; and otherness, 161 f.; in logic and in the concrete reality, 161 f.; three ultimate units of thought, 162.
 Individuating, theistic conception and Buddhistic, 513-516, 211, 221.
 Induction, simple or Baconian, 61-65; the Newtonian or hypothetical method, 65-72. (See *Contents*, § 14.)
 Infallibility not essential to knowledge, 20-26.

Infinite; see Finite and Absolute. *
Influence, of motives, 389-396; distinguished from force, 392, 393.

Innate ideas, 116 f.

Instinct, 346, 538-542, 506.

Integration, 51.

Intellect, definition, 44; connection with the practical side of human nature, 32-35; its acts and processes, 44-87. (See *Contents*, chap. iii.)

Intelligence, an element contributed by the mind, which is active, not passive, 44 f., 89 f.; lapsed, 488-490.

Intuition, definition and classification, 45-47 (see *Contents*, § 10); relation to thought, 49, 72-81. (See *Contents*, § 15.)

Intuition, presentative or perceptive, 88-113; sense-perception, 88-91; self-consciousness, 91-113. (See *Contents*, chap. iv.)

Intuition, rational, 114-151. (See *Contents*, chap. V.)

J.

Jacobi, F. H., 76, 108 f., 148, 384.

Janet, 125, 300.

Jeffrey, theory of the beautiful, 251 f.

Jenner, Dr., 333.

Jevons, Prof., 58, 63, 70, 74, 84, 391, 419.

Jones, Sir Wm., 221 f.

Jurisprudence, 189.

Juvenal, 120, 484.

K.

Kames, Lord, limits beauty to the visible, 233.

Kant, nebular hypothesis, 71, 459; three questions of philosophy, 84, 181; thing in itself, separation of phenomenon and noumenon, 99-109 (see *Contents* § 20), 120, 297; antinomies, 128-135 (see *Contents*, § 25, vi.), 390 f.; matter and form, 152 f.; categories, 152, 154; Ego a synthetic unity of apperceptions, 169, 49; space and time, 163, 202; ethics, 206, 358, 218, 230, 267, 269, 272; historical issues, 102, 174, 169-171; practical reason, 351, 361; classification of mental powers, 365; and Hume, 557 f.; contents in consciousness for the idea of God, 15, 288, 552; comparison of the starry heavens and the moral law, 426 f.; apostrophe to duty, 379; intuition and thought, 89; necessity, 369.

Kepler, 55, 246, 327 f.

Kingsley, Canon, 116.

Knowing, in relation to feeling and willing, 31-43, (see *Contents*, § 8); acts and processes of, 44-87. (See *Contents*, chap. iii.)

Knowledge, what, 10; reality of, 11-20; primitive datum of human consciousness, 11-17; complete agnosticism inadmissible, 17-20; and fallibility, 20-26; criteria of primitive, 26-31, (see *Contents*, §§ 3-7); relativity of, 109-113; is ontological in its beginning, 167 f., 154; begins as knowledge of personal and impersonal, 167-171; begins as knowledge of determinate being, 171-175; scientific distinguished from unscientific, 293 f.; three grades of scientific, 293-344; must pass through each to learn all that may be known of anything, 299 f.

L.

Labor, heathen and Christian estimate, 330-333.

Lactantius, 221.

Lametrie, 435, 540, 544.

Lange, F. A., 71, 92, 125, 148, 309, 315, 413, 425, 428, 436, 440, 442, 446, 451.

Laplace, 71, 452, 458.

Law, general significance, 185-187; definition, 185; laws to intellectual and physical power, 185 f.; determine what is possible to power, the absurd cannot be realized, 185; right and wrong, 185; law of nature, 185 f.; moral law, 186; ethical significance of law and right, 186; ethical terms defined, 187-190; moral law universal, immutable, imperative, 190-193; law not from the will of God, but eternal in the absolute Reason, 195-198; not primarily in the constitution of things, but eternal in the divine Reason, 198-203; the formal principle of the law, 203-205; real principle of the law, 203 f., 205-207; the law of love is the real principle of the law, 207-226. (See *Contents*, § 39.)

Lecky, 39.

Le Conte, Prof., 417, 503, 512, 521.

Leibnitz, 109, 125, 140, 161, 198, 475, 556; his principle of sufficient reason, 59, 84.

Leopardi, 215.

Le Sage, 422.

Lessing, 26, 41.

Lewes, 21, 72, 74, 298, 318, 338, 430 f., 435, 488, 543, 552, 553.

Lewis, Prof. Tayler, 545.

Life, beginning of, see Abiogenesis; not a mode of motion, 547 f.; high order of power, 499 f.; Spencer's definition, 493. Lillie, 221.

Limitation, and quantity, 165; not involved in determinateness, 176; of good involved in finiteness, 530 f.

Linnaeus, 327.

Locke, John, 8, 81, 116, 122, 193, 265, 432.

Lockyer, 74.

Logic, a noetic science, 296; formal logic, its three axioms inadequate, 58 f.; principle of sufficient reason (Leibnitz), 59 f.; Prof. Bowen's reduction to two, 60; principles for the logic of concrete thinking, 60 f.

Lotze, 44, 98, 99, 107, 108, 114, 115, 116, 146, 316, 410, 501, 504, 519.

Love, required in God's law, is a free choice, 359 f.; its object a person to be trusted or served, 357; object is God in his relation to all persons in the moral system, 358 f.; includes love to man, is universal, 207, 208; determines character in its secondary form, 360 f.; is required in the real principle of the law, 207-226; grounded in the existence of man in a rational system, 208 f.; love and duty, 205-207; is not a natural affection, 193, 260-263, 265; God's love, 526-528; law of, 207-226.

Lubbock, Sir John, 544.

Lucretius, 121, 257.

Ludicrous, the, 248.

Luther, 122.

Lyell, 334, 544.

M.

Malebranche, 183.

Man, personality of, 98 f., 408 f., 414; supernatural, 410, 502, 521 f., 384-386; if not, cannot know God or any supernatural being or act, 411, 99, 72, 555; as reason and personal spirit the same in kind with God, is "in the image of God," 8, 82, 146, 143-151, 182; greatness recognized by Christianity, 330-333; brotherhood of, 213, 208-224; implicated in nature, 376, 384, 410, 467; immortal, 37, 520-522; knowledge of personal beings other than himself, 555-559; Pascal on, 426; human characteristics persistent, Maudsley, 545.

Mansel, 18, 35, 98, 129, 133, 163, 291.

Martineau, Harriet, 453.

Martyrs, 453, 482, 483.

Materialism, definition, Fisk's, 501 f., Lange, 425 f.; earlier forms, 413, 435; subjective and objective, 428; distinguished from agnosticism and Comtian positivism, 429; the three each exclusive of the others, 429 f.; subjective contradicts objective, 429; cannot account for facts of personality, 415-420; nor of the physical universe, 420-424, 425 f.; this impossibility implied in theories of scientists, 424 f.; the reality of what is perceived by sense found in the imperceptible and extra-sensible, 416-418; physical universe must have a beginning, 472, 497; the whole action

ends without God, 527; matter in continuous flux, demanding some hypermaterial cause, 508-510; disclaimed by Huxley, 418, 429; metaphysical, not factual, 471 f., 466, 495; distinguish materialistic evolution from scientific, 455; scientific evolution consistent with personality of man and God, 465-471; removes no difficulties and contradictions of materialism, 471-491; at every stage reveals a supernatural and hypermaterial power, 491-502; demands a personal God, 502-536; ethics of materialism, 475-488, 193, 347 f.; practical tendency compared with that of Christianity, 322-324; dualism remains, 421, 451 f.; materialistic objection from positivism, 428-434 (see *Contents*, § 78); from persistence of force, 434-454 (see *Contents*, § 79); from evolution, 455-536 (see *Contents*, § 80); from attributes of brutes, 537-554. (See *Contents*, § 81.)

Mathematics, a noetic science, 296.

Matter and form, 152 f.

Matter, elaborated to become the organ of mind, 493-496; not contradictory to spirit, 413.

Maudsley, Dr., 23, 48, 92, 364, 545.

Mayer, J. R., 448, 449.

McCosh, Rev. Dr. James, 365.

McLean, Judge, collective reason of the people, 189.

Mead, E. D., 24 f.

Mediaeval jargon, 370, 433, 6, 201.

Mechanism or organism as type of the universe, 425, 463-465; Evolution implies growth of the universe, as a germ, 465; Brutes as machines, 547 f.

Memory, 47 f.; physiological explanation, 48, 443-445.

Merit and demerit, 281-283.

Metaphysics, 295 f., 303 f., 7, 8, 9.

Michell, Louise, 261.

Microcosm, man a, 138.

Might makes right, 476, 486.

Mill, James, 48, 159; Mill, J. S., 49, 62, 93, 96, 110, 127, 135 f., 265, 290, 296, 297, 307, 336, 431, 432, 484, 520.

Milton, 72, 203, 237, 241, 259, 264, 306, 324, 362, 524.

Mind, Mill's definition, 431, 531; contradiction of sensationalist definitions of mind and matter, 431-433; Spencer's *x* and *y*, 433.

Minucius Felix, 220.

Miracles, Hume's objection and true induction and uniformity of nature, 65.

Modes of existence, 153-167. (See *Contents*, § 30.)

Moffat, Rev. Robert, 225.

Molecules, atoms, ether, 416, 417.

Moleschott, 143, 431, 435, 436.

Monism, 312, 303, 414; Atoms incompatible with, 446.
 Moral agent, defined, 409.
 Morality, see Ethics, Law, Character, Love.
 Motion, molecular and thought, 434-454. (See *Contents*, § 79.)
 Motive, definition, 345; natural and rational, 345, 346, 347; influence on determinations of the will, 389-396.
 Mulford, 88, 174, 175, 178, 265, 529.
 Müller, Max., 204, 210.
 Mundus intelligibilis, 517.
 Murillo's Madonna, 231.
 Murphy, 110, 138, 238.
 Musical instrument, materialistic illustration, 437 f.
 Mysticism, 118.

N.

Napoleon I., 381, 485; Louis, 484.
 Natural Realism, 88, 89.
 Nature, definition and explanation, 409-412; not a limit and boundary to spirit, but revealer, object, sphere, 385 f., 413; false explanations by theists, 528 f.; effect of physical agents on man's body controlled by will, 381; forces of nature directed to effect results which unguided they could not effect, 382-384; natural selection to be supplanted by man's selection (Wallace), 382, 383; in what sense man is lord of nature, 383 f.; heathen view contrasted with the Biblical, 383, 384; man's implication in nature indicates that he is above it, 384-386; system of nature, 560; redemption of, 534; universe never finished, 534; a transparency revealing God, 513; grades of evolution, 495-500.
 Nebular hypothesis, 458 f., 461.
 Newcomb, Prof. Simon, 300, 439, 498, 557.
 Newton, Sir Isaac, 55, 61, 66, 67, 70, 327, 333, 459, 468, 490, 491, 506, 512.
 Nihilism, in philosophy, 11; in politics, 486.
 Noetic science, 295; its three divisions, 296.
 Noiré, Ludwig, 57, 94, 111, 138, 142, 317, 424, 478, 499 f.
 Norms of reason, classification, 180-182.
 Noumena of Kant, 99-109. (See *Contents*, § 20.)
 Number, 162.

O.

Obligation, 187.
 Observation, a process of concrete thought, 54.
 Ockham, 197.
 Oken, Lorenzo, 337.

Oldfield, on savages, 477.
 Omnis determinatio negatio est, 176-178, 231.
 One and many, a mode of existence, 160-162.
 Opinion, 85-87.
 Order not an efficient cause (Lotze), 504.
 Order and law of the universe archetypal and stable, 524 f.
 Organic, universe mechanism or organicism, 425, 463-465; brutes as machines, 547, 548.
 Ought, 187, 188, intuitive origin, 190.
 Owen, John, 491.

P.

Pantheism, 172-174, 169-171; incompatible with atoms, 446; with knowledge of determinate finite beings, 173, 507.
 Paracelsus and Archeus, 424 f.
 Park, Mungo, 401 f.
 Parmenides, 181.
 Pascal, on a vacuum, 69; on probability, 85; on man, 426.
 Perception, sense, 45, 88-91; Democritus, 556.
 Perceptive, or presentative intuition, 44-46; 88-113. (See *Contents*, §§ 18, 19, 20.)
 Perfect, the, origin and significance, of the idea, 227. (See *Æsthetics*, Beauty, Ideals; also, *Contents*, chap. x., pp. 227-255.)
 Persistence of force, law of, 421; difficulties in applying it, 421-425; materialistic objection founded on it, 434-454. (See *Contents*, § 79.)
 Person, definition, 408 f.; is a moral agent, 409; is supernatural, 409-412; is spirit, 412-414; exists in individuality and identity, 160-162, 414; is essentially an end of action, a being to be trusted and served, not used, 357 f.
 Personality, of man, 414, 3, 98 f., 146, 452-454, 466; thought cannot be accounted for by molecular action, 434-454; distinct from brute life, 537-554 (see *Contents*, § 81); personality in Kant's philosophy, 557 f.; in savages, 553 f.; personality of the Absolute, 291 f.; personality of God necessary to the possibility of scientific knowledge, 560-564, 8, 81-85, 182 f., 143-151; 361, 167 f.; revealed in the universe, 503-536.
 Pessimism, 36, 215; in Buddhism, 211, 221, 516.
 Phenomenalism, 88, 167, 168; Kant's, 99-109; relativity, 109-113; positivism, 428-434 (see *Contents*, § 78); 8, 304 f., 122 f., 123 f., 125, 126, 317-319, 15 f., 321-323.
 Phidias, his Jupiter, 249 f.
 Philosophy, a noetic science, 296; defi-

- nition and explanations, 296-299; four subdivisions, 299; dependence on empirical, 305 f.; Bacon on the spider, ant and bee, 306; mediæval error, 306, 307; existence of God fundamental truth of, 361.
- Physical science, limits of, 550, 421-424, 425 f., 438-447; Du Bois Reymond's supposition of automata, 440.
- Pius IX., encyclical, 329.
- Plato, 138, 153, 181, 183, 196 f., 210, 222 f., 232, 239, 260, 265, 331, 341, 378; Platonic philosophy and Christian theism, 182, 183; his "ideas," conceptions of the mind and forms of things, 153.
- Plautus, 210, 331.
- Pleasures, not of the same kind and worth, 263-266. (See Happiness.)
- Plotinus, 47.
- Plutarch, 223.
- Polytheism, 25.
- Pope, Alex., 297, 511.
- Porter, Pres. Noah, 32 f.
- Positivism, worship of humanity, 150; of Comte, 313, 321 f., 428 f., 430; is thoroughly refuted as a theory of knowledge, 431-433, 10-17, 122 f., 123 f., 125 f., 304 f., 317-319, 321-323, and *passim*; therefore rejected by scientists as inadequate for scientific investigations, 322, 428-430; is not a basis for materialism, 428-434; Spencer, 12.
- Powell, Baden, 147.
- Power, a mode of existence, 153-160; potential and actual or energetic, 514; substance as "individualized power," 159; essential in cause, 159; cannot annul the principles of reason, which determine what is possible, 185, 192, 516 f.; the sum of all power potential and energetic always the same, 505 f., 524 f.
- Practical side of man's nature, influence on knowledge, 32-43; influence of the usefulness of knowledge on its advancement, 41, 42; physical science and Christian knowledge compared in this regard, 323, 324; false and true conception of the love of the truth, 39-41, 43.
- Presentative intuition, 45-47, 88-113. (*Contents*, §§ 18-20).
- Priesthood, scientific, 337-339.
- Prius*, God the *prius* of the universe, 172.
- Probability, 85-86; advance to certainty, 87; probable evidence, assent on, 85 f.; Clifford on, 39.
- Proctor, R. A., 400.
- Progress, dependence on morality and religion, 406; Christian nations the progressive ones, 406 f.; the spiritual precedes the physical, 330; prospective, 528, 521, 525 f., 527, 533 f., 563, 564.
- Protagoras, 143, 197.
- Prudential motives and emotions, 284.
- Psalm I., 281.
- Pseudo-absolute, 289-291.
- Psychological knowledge through self-consciousness, Comte and Mill, 92-94.
- Ptolemaic Astronomy, 294, 464, 548.
- Pyrrhonism, is complete agnosticism, 11.
- Pythagoras, 181.

Q.

- Quantity, a mode of existence, 165.
- Quatrefages, 225, 461, 554.
- Questions of philosophy, Kant's three, 84; the four ultimate, 181.
- Quételet, on averages, 401.

R.

- Raphael's Madonna and Murillo's, 231.
- Rational Intuition, definition, 46, 114; present in perception, 89; gives the "forms" of knowledge, 152, 181; what is known through, 114-151 (for analysis, see *Contents*, chap. v.).
- Rationalistic, a name of noetic knowledge, the second grade, 294; definition, 295; its three divisions, 296.
- Real freedom, 387.
- Realities of human knowledge, ultimate, 151-154; definition, 152; Classification, 153 f.
- Reality, of human knowledge, 11-20; a broader term than being, 158.
- Reason, definition, 47; cannot transcend itself, 106 f.; the five ultimate realities known through the Reason, or ultimate ideas of reason, 180; the four norms or standards, 180 f.; reason the same in kind in all rational beings, 8, 82, 182 f., 143-151; universe grounded in, 83, 171, 426, 144, 506-510, 516; God is energizing Reason, 8, 81-84, 448, 468-471, 420; necessary to the possibility of science, 560-564, 312-314, 361, 82 f. (See Archetypes.)
- Redemption, 532-536, 562-564; of nature, 534, 563.
- Redi, Francesco, 325.
- Reflection, or thought, 48. (See Thought.)
- Reid, 49, 63, 65, 81, 166.
- Relation, 51, 110.
- Relativity of knowledge, 109-113.
- Religion, permanence of, 318; of the feelings, 7; religious belief and probability, 86 f.; fetichism, 25, 556; Polytheism, 25.
- Renan, Ernest, 24, 338.
- Representation, 47, 48.
- Reymond, Du Bois, 421, 425, 440, 443, 445, 450.
- Right, the, second ultimate reality of reason, 185-226. (See *Contents*, chap. ix.).

Roebuck, Mr., 477.
Rückert, 55, 522.
Ruskin, 241.

S.

Savages, all make moral distinctions, 225 f.
Scaliger, 108.
Schelling, 43, 71.
Schiller, 25 (note), 277.
Schleiermacher, 202 f.
Schools, moral and religious instruction in, 406.
Schopenhauer, 118, 215, 424.
Science, definition, 293, 294; distinction from unscientific knowledge, 293; is physical and mental, 178 f.; three grades, defined, 294-301; proof, 301-304; harmony, 304-319; alleged conflict, how it arises, 319-321; reconciliation, 321-326; the antagonism exaggerated, 326-334; accounting for facts, two senses, 414, 415; knowledge in each grade is science, 300 f.; unwarranted restriction of the name to one grade, 300, 301, 321 f.; restricted as empirical science of nature is in conflict with all learning other than physical and physiological, and with highest moral motives and creations of art and poetry, 322-324, 484 f.; thus restricted, limited in two directions, 447, and cannot account for mental phenomena, 415, 438-447, 454, nor for those of the physical universe, 420-426, nor recognize personality, but is in its essence materialistic, 450-454, 414-427, 315-317, nor complete itself as science, 8, 122 f., 123 f., 125, 126, 430-434, 317-319, nor start and stimulate scientific investigation, 314 f., and contradicts the constitution of man and the nature and history of human thought, 315-319; principles on which the possibility of all science rests, 150 f.; historical fact that physical science tends to the ideal and spiritual, 430, 424 f., 123; necessary from the interdependence of knowledge in its three grades, 304-315; knowledge must ascend by the three grades in order to know all that may be known of any object, 299 f., 304-319, 309; science legitimately culminates in theology, 312-314, 303, 304; rationale of science, 313; the three grades are in harmony because interdependent, 304-319; their conflicts, the occasion and the way of reconciling, 319-335, 340-344; the opposition of theologians to materialism and atheism under the guise of science, not to be confounded with opposition to science, 337-340. (See *Contents*, chap. xiii.).

Scientific priesthood, 337-339.
Scientists, opposition to new discoveries, 333, 334.
Sears, Rev. Dr., 492.
Sedgewick, Prof., 117.
Self-consciousness, 45, 46, 449. (Also, see *Contents*, §§ 19, 20, pp. 91-109.)
Seer, 245.
Self-determination, 349.
Self-direction and self-exertion, 349 f.; 351.
Self-love, 284.
Self-respect, 283 f.
Seneca, 210, 234.
Sensationalism, materialistic objection founded on, 423-434.
Sense-perception, 45 f., 88-91; relation to rational intuition, 89, 125 f., 152 f., 156; coexistence of subject and object most certain truths, Spencer, 12.
Sensibilities, 345-348; ethical, 193-195; æsthetic, 243-248; influence on knowledge, 348, 43, 38-41, 31-38; relation to determinations of the will, 389-396; distinguished from determinations, 364 f.
Shelley, 236.
Shields, Prof., 64.
Sin, the essential evil, 278 f., 532, 562.
Skepticism, epochs of, incidental to progress of Christianity, 342 f.; of the present compared with previous times, 340-344; their misconception of theism, 84; universal, same as complete agnosticism, 11.
Slavery, heathen and Christian influence on it, 331 f.
Smith, John, 47, 115, 362; Prof. J. L., 337; Sydney, 265.
Society, materialistic and Christian conception of rights of individual in, 477-479; a social organism, 405, 477, 553.
Sociology, consistent with free will is possible, 402-407.
Socrates, 72, 181, 196, 210, 236, 240, 352.
Solidarity of mankind involves obligation of brotherhood, 213.
Sophists, ethics of, 218.
Sophocles, 224, 523.
Space, extension in, a mode of being, 162-164; Kant's theory of, 163 f.; fourth dimension, 164; and time as related to God, 514.
Specialists, influence of their occupation, 336.
Spencer, H., his agnosticism self-contradictory, 13, 35, 75, 135, 196, 446 f.; affirms necessary knowledge of the existence of the absolute being, 286, 75 f., 135, 196, 505; result of applying to this his doctrine of heredity, 288; certain knowledge of the coexistence of subject and object, 12; criterion of primitive

- knowledge, 27; validity of self-evident first principles, 126; his antinomy and relation to Kant, 133-135; doctrine of the ego, 370, 433; freedom of will, 370-372; ethics, 217, 479-481; evolution, 456, 459, 469 f., 463; theoretically incompatible with positivism and materialism, 429, 481; with more logical consistency might accept theism, 469-471, 76; no half-way house of Spencerian agnosticism between complete agnosticism and theism, 513.
- Spinoza, 57, 172, 173, 177, 178 (note), 470.
- Spirit, definition and explanations, 412-414; man is spirit, 414-427, 445-449; origin of the idea in primitive man, 555-557; man knows himself in self-consciousness as having attributes of, 97-99; objection, no knowledge in experience of disembodied spirit, 449 f.
- Spiritual body, 386.
- Spontaneous generation. (See Abiogenesis.)
- Stallo, J. B., 458.
- Sterling, 42.
- Stephen, Fitz James, 126.
- Stephen, martyrdom of, 237.
- Stewart, Prof. Balfour, 438, 503; Dugald 63, 115.
- Stoicism, 276 f.
- Stuart, Moses, 533.
- Sublimity, 241, 247.
- Substance, 156 f., 104; substantia una et unica, 172.
- Sufficient reason of Leibnitz, 59, 84.
- Sully, James, 468, 510.
- Summum Bonum, 258, 277.
- Sumner, Charles, 484.
- Supernatural, all personal beings are, 410, 502, 521 f., 384-386; if not, cannot know God nor any supernatural being, 411, 99, 72, 555; Argyll's objection, 211; revealed in evolution, 491.
- Superstition accompanies atheism, 556 f.
- Supreme choice, 354, 357-361.
- Swift, Dean, sweetness and light, 31 f.
- Symmetry, 232.
- System, moral, 560; ground of belief in the law of love, 208 f.
- Systematic theology, 2.
- Synthesis of being and phenomenon, 157, 102, 169 f.; of reason and faith, 7, 77-79.
- T.**
- Tappan, H. P., 351, 394.
- Teleological argument and evolution, 502.
- Tennyson, 237, 264, 407, 412, 546.
- Testimony, knowledge from, 80 f.
- Theism. (See God.)
- Theology, defined, 1, 2, 299; rests on experience, 1; begins with empirical knowledge of facts, 15, 16, 17, 307, 308; advanced by concrete thought, 201, 84; is progressive, 334 f.; empirical and noetic science carry their unanswered questions to it, 310 f.; the largest unity only in it, 211 f.; all science culminates in it, 312-314; is the great source of stimulus to investigate the universe, 314 f.
- Theremin, 216.
- Thing in itself of Kant, 99-109.
- Thompson, Rev. Dr. Wm., 62; Sir Wm., 71, 424; primitive fluid, 495 f.
- Thought. (See analysis in *Contents*, § 12-17, pp. 48-87.)
- Tiele, 554.
- Time, duration in, a mode of existence, 165; in reference to evolution, 461, 473 f., 455; and space as related to God, 514.
- Torricelli, 556.
- True, the, first norm of reason, norm of thinking and knowing, 182-184.
- Turretin, 412.
- Taylor, 225, 235, 541, 544, 554, 556.
- Tyndall, 18, 67, 75, 134, 314, 328, 335, 338 435, 440, 442, 454, 462, 492, 493.
- U.**
- Ugly, the, 242; emotions awakened by, 248.
- Ulrici, 7, 51, 53, 469.
- Ultimate realities. (See Realities.)
- Uniformity of human action, 396-402; of nature, 62-65.
- Universe, expression of thought archetypal in absolute reason, 90, 516-519, 495; never completed, 534-536; created by God, 508-510; dynamic conception, 418 f.; deistic conception, 510, 529; mechanical conception, 463 f.; organic, 464 f.; materialistic, 503 f.; theistic, 504, 508-536; dependent on God, 512; God immanent in, 510-513; progressive, 518-523; order and law fixed, 525.
- Utilitarianism, 189, 193.
- V.**
- Value and worth distinguished, 269.
- Van Helmont, 425.
- Vernet, 248.
- Véron, 232.
- Virchow, 339, 460.
- Virgil, 364, 511.
- Virgilius, Bp., and the pope, antipodes, 325.
- Vitellio, 69.
- Vogt, 435.
- Volition, 349, 354-357.
- Voltaire, 86, 333.

W.

Wallace, 382 f., 467.
 Well-being, distinguished from happiness, 256, 271.
 West, Rev. Dr., on the will 390.
 Whewell, 69, 302, 333.
 White, James B., 42.
 Wilkins, Bp., 333.
 Will, the, definition and explanations, 349-351. (See Choice, Volition, Determination, Freedom, Man, Motives, Character, Uniformity, Sociology; and

for analysis, *Contents*, chap. xv., pp. 349-407.)

Word-weariness, 306, 307.

Worth, estimated by standard of reason, 267 f.; distinguished from *value*, 269.

Wright, Chauncey, 138, 474.

Wurtz, 416, 417.

Y.

Youmans, 430.

Young, 419.

Z.

Zeno, 132

41873

BL
200
H3
1894

Harris, Samuel, 1814-1899.

The philosophical basis of theism; an examination of the personality of man to ascertain his capacity to know and serve God, and the validity of the principles underlying the defence of theism, by Samuel Harris ... Rev. ed. New York, Charles Scribner's Sons, 1894.

xxii, 577 p. 24 cm.

1. Theism. 2. Knowledge, Theory of. 3. Personality (Theory of knowledge) I. Title.

BL200.H3

CCSC/jc

337690

